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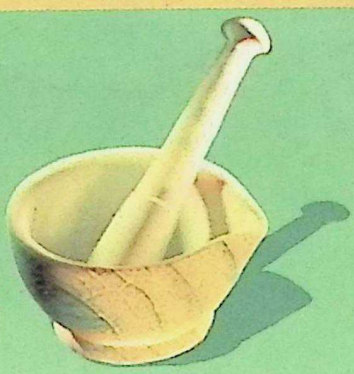
Thomas J. Graham

Ayurvedic Materia Medica For Domestic Use

A Guide for Every Home



Volume One

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The treatise presents a clear and correct description of the nature, symptoms, causes, distinction and most approved treatment of the diseases to which the human frame is liable. The author tries to lay before his reader a just and clear view of the nature of the different maladies treated of, and the best and most manageable remedies for the relief of pain and irritation, and the cure of disease. In every case, the Head of Treatment has received the greatest attention, because it is the most important; and under this division the plan or plans of management which are generally applicable to the particular malady treated of, and which are the most certain of success, in the majority of cases, have in general been first laid down, and afterwards almost every other useful remedy has been described separately so that the user will find a determinate mode of treatment, of general and superior efficacy detailed under each malady for which he may be desirous of prescribing.

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विषय संख्या ..... आगत नं० .....
लेखक Thomas J. Graham
शीर्षक Ayurvedic Meteria Medica for Domestic Use

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ऊपर कोई निशान आदि
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Ayurvedic Materia Medica for Domestic Use

A Guide for Every Home

VOLUME - ONE

By

Thomas J. Graham

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PREFACE

My object in the composition of the following Treatise has been to present the unprofessional reader with a clear and correct description of the nature, symptoms, causes, distinction, and most approved treatment of the diseases to which the human frame is liable; knowing that such a work is in constant requisition by clergymen in their endeavours to help their poor parishioners, and also by the heads of families in the absence of their medical friend; and that to travellers, emigrants, and persons proceeding to a foreign climate, it must prove of frequent, and sometimes of signal, service. The chief design of the writer of a work of this description should be, I conceive, to lay before his readers a just and clear view of the nature of the different maladies treated of, and the best and most manageable remedies for the relief of pain and irritation, and the cure of disease; and these are the objects which I have constantly kept in view throughout the volume, and to the accomplishment of which every consideration of minor importance has been sacrificed. In every instance, the HEAD OF TREATMENT has received the greatest attention, because it is the most important; and under this division the plan or plans of management which are generally applicable to the particular malady treated of, and which are the most certain of success, in the majority of cases, have in general been first laid down, and afterwards almost every other useful remedy has been described separately. So that the reader will, I hope, find a determinate mode of treatment, of general and superior efficacy, detailed under each complaint for which he may be desirous of prescribing, and thus be preserved from doubt and anxiety as to those remedies which merit his first and chief regard.

So far as my experience and observation extend, the soothing plan of treating diseases will be found almost invariably the best and most successful, and this conviction has constantly influenced

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me in the advice and instructions now offered. On this point, no higher general principles can be presented for the reader's consideration and guidance than these, —THE FORMATION OF HEALTHY BLOOD AND THE RELIEF OF IRRITATION ARE THE GREAT OBJECTS OF MEDICINE. These truths it is of immense importance he should bear in mind, whenever he wishes to alleviate bodily sufferings in himself of others; for he will uniformly find, that those means which are the most powerful in promoting the life and purity of the blood, and in allaying irritation, are the most speedy and effectual in the relief and cure of disease. These facts have stimulated me to oppose, to the best of my ability, in these volumes, as well as in my other publications, the frequent and excessive use of mercury, and all other debilitating means,—a practice far more general and destructive than is commonly apprehended. Mercurial preparations, especially calomel, are of inestimable value; but it must never be overlooked, that the quentity administered ought to be very small. Mercury, taken in minute doses, soothes and tranquillizes the disordered system, and sometimes proves the most certain and powerful means of recovery; but when given in large doses it breaks down the integrity of the blood, becomes highly irritating to all the organs, and, for the most part, permanently deleterious.

The human body often falls quickly into a state of debility and disease, but from such a condition, the progress towards recovery is generally slow, (although it may be certain), even under the use of the most efficient means of cure; consequently, when any advantage is gained in the beginning, from the administration of medicine, together with a good diet and regimen, we have much reason to be satisfied, and both our wisdom and strength will lie in following up this advantage by perseverance in nearly the same measures. In the practice of medicine, small beginnings frequently ripen into grand results, and it is too often from a disregard of this truth, and a foolish desire to try new plans of treatment, that persons afflicted with severe diseases fail to get well.

In the original composition of these volumes, and in its subsequent revision, I have uniformly and earnestly endeavoured to exhibit the real value of different professional opinions and modes of medical practice; being desirous throughout to divest

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myself of all undue partiality, either to the one side or the other, so that my readers may be enabled to recognize here a fair statement, and an unbiassed opinion of the real value, both of prevailing and conflicting sentiments, so far as my ability enables me to exhibit them. In all the affairs of human life, it is, unhappily, too frequently found that prepossession, prejudice, of interested motives, exert a powerful sway, as well over the judgment as the affections of mankind; and hence partly have arisen the error, misrepresentation, and conflict, so remarkably conspicuous in medical writings and opinion. Of course, I cannot hope that the present sheets will be found free from imperfection and error; but if I have erred, I enjoy the sweet satisfaction of knowing that it has not only not been wilful, but also that it has not been without a most sincere and resolute endeavour to state the *real truth*. In no case, to my knowledge, have I delivered an opinion, more especially if relating to practical matters, which has not been verified by personsl experience, or sanctioned by the authority of distinguished professional men, whose veracity and ability are undoubted.

I do not desire or expect to make unprofessional people skilful physicians, but the diseases to which flesh is heir are so many, so painful, and so complicated; the circumstances of the sufferers are so various and changeable; the difficulty of procuring immediately efficient medical assistance is sometimes so great, and the influence of medicines and other means, that may always be safely used, is so salutary, —that we possess herein multiplied and sufficient reasons for diffusing among the public minute descriptions of diseases, and the most precise directions, that can be embodied in a moderate space, for the use of efficient medical means of relief and cure. Accordingly, from medical men in the army and navy, from retired professional men, and also from some of high standing in active practice, the author has received the most flattering testimonies to the value and usefulness of this work. I shall only add in the words of one of the most illustrious of physicians : — "I have always thought it a greater happiness to discover a certain method of curing even the slightest disease, than to accumulate the largest fortune; and whoever compasses the former, I esteem not only happier, but also better and wiser. For can a person give a

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stronger proof of his benevolence and wisdom than by endeavouring always to promote the public good, rather than his private interest, as he makes so small and inconsiderable a part of the whole? and, in reality, as it is the part of a wicked man to destroy his fellow-creatures, so it is the duty of a good man to preserve them, and instruct others how to save them from death, even after his own decease. Nor can anything be more inhuman and detestable than to insinuate a disregard and unconcern for whatever misfortunes may happen to mankind after our death." — *Sydenham's Works*, vol.ii. p. 384.

I beg leave to recommend to the female part of my readers my TREATISE OR THE DISEASES OF FEMALES, and to the clergh and heads of families my volume. ON INFANCY AND CHILDHOOD.The first describes the proper management of women before and after delivery, with an ample consideration of their peculiar maladies, and of many points of uncommon consequence, especially to persons living in the country, or embarking for foreign lands. It contains also engravings of the different regions of the body and the situation of the viscera, with a Glassary of Medical terms, additional prescriptions, etc.. The volume on *Infancy and childhood* embraces the subjects of nursing, food, weaning, choice of wet nurses, exercises of children, bathing, clothing, moral management of children, hints for the mother's management of herself, approved prescriptions in children's disorders, and a consideration of the complaints peculiar to Infants and Children, etc. Both these works should invariably accompany the *Domestic Medicine*, to which they are designed to be supplementary and companions.

N.B. The reader's attention is requested to the following remarks, and also to those on the anatomy and physiology of the intestines at page 696.

1. By the term *disorder of function* is here meant, a derangement of the natural of healthy functions of the organ or part affected. For example, a disordered liver, or a disorder of the stomach, indicates a derangement of the biliary secretion, or a derangement in the secretions and general functions of the stomach.

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2. By *organic disease* or *organic injury* is meant, actual disease in the structure of the part affected. A diseased liver or stomach, therefore, means an actual alteration in the structure of the liver or stomach; which, for the most part, is incurable, except in the incipient stage, but commonly admits of great relief. Persons with organic disease may live and enjoy a large measure of comfort for many years, provided their method of living is well regulated.

3. As disorders or diseases of the lungs form so large a proportion of our bodily maladies, the reader will find it necessary to have some clear ideas of the structure of the lungs, in order to understand what is said of the nature and causes of *asthma, cough*, etc. I would, therefore, remark, that the most accurate investigations seem to prove that the pulmonary organs are principally composed of the windpipe, and its terminations called *bronchia*, which, at their extremities, are subdivided into a multitude of small canals, terminated by culs-de-sac of a globular form, grouped somewhat in the manner of the terminal branchlets of the cauliflower. So that we may say, that the parenchyma, or substance of the lungs, is formed by the aggregation of a multitude of small vesicles (called air cells), of an irregularly spheroid or ovoid figure, full of air, and separated from each other by opaque white partitions.

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AYURVEDIC MATERIA MEDICA
FOR
DOMESTIC USE
Containing an Account of the Principal Medicine

Materia Medica is that department of the science of medicine, that treats of the nature and properties of the substances which are employed as remedies to restore health to diseased bodies. It constitutes the first part of the present work, and contains an account of the medical virtues, doses, and different preparations, of all such medicines as are used in domestic practice and with the use of which it is advisable for every one to be in some measure acquainted. Appended to it is a copious collection of approved prescriptions adapted to family use; and a description of the properties, virtues, and correct manner of using the different mineral waters of Europe, and the warm, cold, and vapour baths.

ACONITE

Or monkswood, is a powerful poison, not fit for internal use in any case; but externally applied, in the form of ointment mixed with lard, it is often efficacious in relieving nervous and rheumatic pains. It is better adapted to nervous pain (*neuralgia*) than to rheumatic pains, and should always be cautiously used under the direction of a skilful medical man.

ALOES

Aloes is a bitter, warm, stimulating purgative, of slow solution, and which acts chiefly on the lower intestines. It empties the large

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intestines without making the stools thin, and is a very useful purgative, especially in the habitual costiveness of the sedentary and hypochondriacal, or in that arising in *jaundice*, *green-sickness* and *scropheula*. It likewise promotes the monthly flow in women, and the discharge from piles in men, and, therefore, when a stoppage of these discharges has been followed by injurious effects, it should always form a part of the opening medicine administered; on the contrary, when these fluxes are already too profuse, or apt to recur on the operation of slight causes, aloes should never be given.

The dose is from five to fifteen grains, made into a pill with a little soap and mucilage of gum arabic; but it is almost always best given in combination with colocynth and myrrh, etc. as in the compound colocynth pill. Aloes forms the basis of most of the aperient pills in common use, such as Dixon's, Hooper's, and Fothergill's Antibilious Pills. Lady Webster's, or Lady Crespigny's dinner pill, is made by mixing three drachms of the best aloes with one drachm of mastic and one of red roses, which are to be beat into a mass with a sufficient quantity of syrup of wormwood, and divided into one hundred pills. One, two, or three of them are taken every day an hour before dinner. They produce a copious and bulky evacuation, and, when they agree, increase the appetite.

The *beaume de vie*, or compound decoction of aloes, presents an excellent form of taking aloes. In this way it does not at all injuriously affect the *rectum.*

There are several kinds of aloes, the best of which are the socotorine, which is in small pieces of a reddish brown colour.

ALKALINE SOLUTION

This medicine is a solution of lime, the ashes of the ash tree, etc. in water, and was first recommended to public attention as a valuable remedy in king's evil and general debility. It certainly is sometimes of great utility in *indigestion*, *bilious complaints*, *and red gravel*; also in general weakness accompanied with a sense of fluttering about the heart. Under the head of *Indigestion*, I have noticed the description of cases in which it is more especially useful. An elderly

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lady was some time since complaining much of languor, weakness, drowsiness, and an uncomfortable sensation of fluttering about the region of the heart, occasionally accompanied with deficient appetite, to whom I recommended a trial of this alkali, in doses of half a tea-spoonful twice a day, in a tea-cupful of milk and water. After taking it for three or four weeks, she found her spirits much enlivened, and her appetite and strength greatly increased; and by continuing it a short time longer, the sense of fluttering entirely left her, and she became quite well, after having tried in vain various tonic medicines recommended to her by several able professional men whom she had previously consulted. Its powers of neutralizing morbid acidity in the stomach, and thus curing heart-burn, are scarcely to be equalled by any other medicine, excepting the water of ammonia; and so great has been its value from possessing this effect, and the power of increasing the appetite and general strength, that many persons, after taking a first quantity, have sought eagerly for a second. A skilful surgeon at Cheltenham, who had administered it to several respectable patients there, told me that his supply was unavoidably exhausted for some days, during which short period the applications from his patients for fresh supplies were numerous and pressing. In *red* gravel and in stone, it is an appropriate and most efficacious remedy.

Its administration is attended with good effects both in chronic and acute gout, during the intervals of the fits. It is also very beneficially employed in the decline of gouty attacks, when the critical evacuations cease too soon from want of constitutional energy, or when they, on the other hand, continue too long and occasion debility; in the complaints of the stomach, as heart-burn, loss of appetite, etc. so distressing to the victims of chronic gout; and in the langour and debility succeeding or accompanying gouty attacks. For the relief of these symptoms, it is good practice to give it in decoction of bark, as we thus use an effectual antacid and tonic.

Several cases of spasmodic asthma have been cured by it; and in the habitual asthma also, and old coughs of aged persons, it is

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useful. It is likewise of much service in some eruptions of the skin, particularly those which are connected with acidity, and other disorders in the stomach.

Its obvious qualities are those of a tonic and antacid, strengthening the stomach, and promoting the appetite. Sometimes great advantage is derived from putting two or three drachms of coarsely powdered rhubarb, into a small six-ounce bottle of the alkali. In this state it is called *the alkaline tincture of rhubarb*, and is more aperient than in its simple state, and perhaps more tonic. The proper dose is half a tea-spoonful, gradually increased to a tea-spoonful, twice or thrice a day, in water, milk and water, linseed tea, or any other agreeable vehicle; but it requires to be taken in a good deal of liquid, not less than half a tea-cupful, and all acid and subacid fruit must be avoided while taking it. It is prepared by Mr. G. F. Watts, *Chemist, No.* 68, *Strand, London, from whom it may always be obtained of excellent quality.*

AMMONIA

This is one of our most valuable saline alteratives, stimulants, antacids, diaphoretics, and antiseptics. It is generally employed as a stimulant, but its operation is really that of a mild and yet most efficient *blood-medicine*, that is, a medicine whick quickly improves the quality of that vital fluid, neutralizing poisonous matter in it, gently determining to the surface of the body, and improving the cutaneous secretion. Ammonia is carried directly into the blood, and beneficially affects the nerves through the circulation, of which we have clear and abundant proof. It is a diffusible sustaining saline alterative, and antiseptic; but from the crude notions usually advanced by writers on Materia Media, professional men have contracted the opinion that it is merely a stimulants although a valuable one, and therefore not to be depended on in formidable complaints. This is assuredly an erroneous opinion, from which many have severely suffered. Dr. Chapman, who was at the head of the profession in America, has an important remark in point. "In one respect", he says, "this medicine differs from

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every article of the class to which it is attached, and, it would seem, from all other medicines. The peculiarity to which I allude is this, that the excitement it raises approaches more nearly to that of healthy action."[1] No doubt it does, because it does not properly belong to the class of stimulants, but to that of restorative blood medicines, which counteract a septic tendency in the organic fluids.

The principal preparations of this medicine are, 1. The *Sesqui-Carbonate of Ammonia,* and 2. The *Water of Ammonia.*

Sesqui-Carbonate of Ammonia (formerly called *subcarbonate*) is beneficially given in *hoarseness, scarlet fever, measles, gout, hysterics, indigestion*, and *erysipelas*. It is highly useful in those stomach affections which follow habits of irregularity and debauchery, and in cases of muscular debility so frequently witnessed as the consequence of chronic rheumatism. In the latter instance it should be given in large doses, as twelve or fifteen grains, or more, thrice a day, in spearmint water, or camphor mixture. It possesses specific powers in *scarlet fever, measles* and *diphtheria.*

Sesqui-Carbonate of Ammonia does not act on the nerves but on the blood, and is one of the mildest and yet most powerful and salutary *blood medicines* we possess. If it is not natural to the blood, yet it is a *vital antidote*, possessing the specific property in *scarlet fevers, measles*, and erysipelas, of counteracting and destroying the morbid material by which these diseases are induced. Instead of being temporary in its action, as it has been too much the fashion to regard it, it is permanent; effecting in a marked manner lasting relief and cure, partly by counteracting the putrescence of the fluids, and partly by expelling the offending matter. It does not directly exalt nervous force, but it is most evident that it supplies vital force, and thus increases nervous energy. It invigorates the capillary vessels, accelerates the movement of the blood in them, and effectually controls the strong tendency in scarlet fever and diphtheria to fibrinous deposition. It aids materially in the change of venous into arterial blood. Hence its singular efficacy, in combination with squills, in the chronic bronchitis of old people; and, when combined with tartar emetic, in acute bronchitis and

1. Eberle's *Materia Medica*, vol. ii. p. 164.

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pneumonia at all ages. Both in acute and chronic bronchitis, when we see the signs of venous blood mingling in the general circulation, the complexion being dusky, and the lips bluish, ammonia is a valuable remedy in combination with emetic tartar. The latter medicine checks and reduces the inflammation present, and the ammonia sustains the strength and promotes expectoration, by invigorating the capillary circulation and assisting in arterializing the blood.

In indigestion and bilious affections, this medicine will often be found very efficacious, in correcting acidity, relieving languor and chilliness, and exhilarating the spirits; indeed, for the relief of these symptoms it has scarcely any equal; and an important advantage attending its use is, that the benefit bestowed by it is more or less permanent. The cases most benefited by it, are those in which the pulse is feeble, and in which the patient complains of great depression, hangs over the fire, and says, that no exercise he can take has the effect of warming him.

The ordinary dose is from five to eight grains, twice or thrice daily, dissolved in some aqueous vehicle. The dose may be dissolved in three table-spoonfuls of spearmint water, or camphor mixture, to which a tea-spoonful of compound tincture of cinnamon may be added. *See* mixture No. 79. In some cases larger quantities are taken. Those who prefer it may take it in pills, by mixing a drachm with a little extract of chamomile, and dividing the mass into twelve pills, of which one or two may be taken, thrice a day.

With the addition of a little scent, it forms the common smelling salts of the shops, and thus applied as a local stimulant to the nostrils, is useful in fainting, hysterics and languor.

Water of Ammonia, (Liquor Ammonia. This is a very valuable stimulant, diaphoretic, antacid and antiseptic, being speedily absorbed, and operating in a very salutary manner on the blood of every part. Thus, it will often speedily cure head-ache and heart-burn, and is the most efficacious remedy known for the bites of serpents, and all other venomous animals, and of insects. *The usual dose* is from ten to twenty drops, *largely diluted* with water, say in half a tumblerful of water. Ten or twelve drops in a wine-glassful

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of water are given on ordinary occasions; but in the bites of venomous serpents, or insects, it ought to be given in doses of twenty drops, or even half a tea-spoonful, in half a tumblerful of water, every hour or two.

Rubbed over the throat and chest it is of great service in sore-throat, cough, and pains of the chest, and it gives some instant relief. It is one of those articles which should be kept in all houses at all times, in a stopper bottle.

ANTIMONIAL WINE

Antimonial wine is made by dissolving a scruple of emetic tartar in eight ounces of boiling distilled water, to which, after filtering, two ounces of rectified spirit of wine must be added.

This preparation is a useful diaphoretic and emetic. In feverish states of the constitution it is usually combined with Mindererus's spirit, and the sweet spirit of nitre, which, with water, forms the common diaphoretic draught. In acute rheumatism it is sometimes of great utility, when in combination with laudanum, especially in the commencement of the disease. A valuable anodyne sudorific is formed of six drachms of antimonial wine and a drachm of laudanum, of which mixture eighteen drops may be taken in water every four or six hours. In this state it determines to the surface, produces perspiration and relieves pain. Half a tea-spoonful of this mixture at bed-time is a very convenient and proper medicine for promoting perspiration, and carrying off cold, in ordinary cases, plenty of warm slop being drunk at the same time.

An excellent medicine for eruptions on the skin is made by mixing together four drachms of antimonial wine, one of laudanum, and one of the solution of bi-chloride of mercury; of which from twenty to thirty drops may be taken night and morning, in water, or any other agreeable vehicle.

ARSENIC

The greater part of the white oxyde of arsenic of commerce is

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obtained in Bohemia and Saxony, in roasting the cobalt ores, in making zaffre, and sometimes by sublimation from arsenical pyrites.

This substance has been long known as the most virulent of the mineral poisons. In a very small quantity it occasions vomiting, purging, tremors, and palsy; in a quantity a little larger, it excites some pain in the stomach, with a sense of heat extending from the gullet, extreme thirst, violent vomiting, with anxiety and depression. Notwithstanding, when properly administered, it is occasionally a medicine of great efficacy, and is employed internally as a tonic, and externally as a caustic.

It is used internally with the beat effects in *ague* and *periodic head-ache*; and is sometimes of great service in *leprosy* and other *cutaneous eruptions, chronic rheumatism, seirrhus* and *cancer*. It has long been used in Lincolnshire as an empirical medicine, under the name of the "ague drop", with unusual success in the cure of intermittent fever; and Dr. Fowler, of Stafford, has established its reputation as a powerful remedy for periodic head-ache. It sometimes proves of greater benefit in leprous affections and chronic rheumatism, than any other medicine; and is now and then used, with similar advantage, in scirrhus tumours, and open cancer. In some forms of tic doloureux and epilepsy, it has likewise been administered with success; and also in some anomalous cases of severe nervous disorder. The solution of arsenic was given to a man who had been for four or five years afflicted with trembling of the hands, great irritability, and other severe nervous symptoms, and perfectly cured him.

The internal use of arsenic is improper in all cases attended with strong arterial action, and where there are any pulmonary symptoms; and should a cough even intervene during its use, it should be instantly discontinued. When it is exhibited in proper cases and with necessary precaution, the effect it produces must be carefully watched : the feeling of swelling and stiffness of the eye-lids and face, heat, soreness and itching of the edges of the eye-lids, or tenderness of the mouth, are indications that the dose of the remedy has been carried to its full extent, and should then be diminished. It should be altogether abandoned if pain of

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the stomach, nausea, vomiting, head-ache, vertigo or cough be induced.

The best mode of giving this active substance is in solution, in the form of the arsenical solution of the shops, which may be given in a dose of four drops, twice a day, in any agreeable vehicle, and gradually increased, if necessary, to double or *treble* that quantity, twice a day.

As an external applications arsenic has been long employed in cases of cancer; and will certainly do much to improve the ulceration, and give it a disposition to contract and heal. But in this point of view it is a less safe and efficacious remedy than preparations of iron. It has been sprinkled in the form of a powder upon the sores : but the most violent pain follows this mode of applying it; and, in some instances, probably from its absorption, the general system has been dangerously affected.

The more usual mode of using it is in the form of a lotion, composed of eight grains of white arsenic, and the same quantity of subcarbonate of potash, dissolved in four fluid ounces of water; or as an ointment, formed by rubbing together one drachm of arsenic, and twelve drachms of spermaceti ointment. These applications produce less pain and irritation, cause the diseased parts to slough off, and amend the fetid discharge.

ARTIFICIAL ASSES' MILK

The value of asses' milk as an article of diet for the consumptive, is well known and where it cannot be procured, an excellent substitute for it may be made by pouring half a pint of water of super-carbonate of soda upon two ounces of boiling milk. Or it may be made in the following way :—Take of eryngo root and pearl barley, of each, half an ounce; liquorice root, three ounces; water, a quart; boil it down on a gentle fire to one pint, then strain it, and add an equal quantity of new cow's milk warm. If eight or ten fine garden snails are bruised together, and boiled in the mills for a quarter of an hour, strained, and then added to the other ingredients, the value of the substitute, as a restorative, will be much increased.

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AROMATIC CONFECTION

Take of cinnamon bark and nutmegs, two ounces of each; cloves, an ounce; cardamom seeds, half an ounce; dried saffron, two ounces; prepared shells, sixteen ounces; refined sugar, powdered, two pounds; water, a pint. Rub the dry substances, mixed together, into a very fine powder; then add the water gradually, and mix until the whole be thoroughly incorporated. This forms the Aromatic Confection of the shops, which is a useful combination of various aromatics, given with advantage in nervous languors, and gout in the stomach. It is a common and valuable addition to the chalk, and other mixtures, administered for the purpose of moderating looseness. The dose is from ten grains to a drachm or more.

ASSAFOETIDA

This article is a gum resin, obtained from the roots of a tree which is a native of the south of Persia. It is brought into this country packed in cases, mats and casks. The best is clear, and of a pale reddish colour, contains many of the white tears, and has the odour very strong.

It is powerfully antispasmodic, and expectorant, and is given with advantage in *hysterics, low spirits, flatulent colic*, and in the *coughs* of the aged and the nervous. The dose is from five grains to a scruple; it is best taken in the form of pills, on account of its nauseous taste. In hysterics a drachm of assafoetida may be mixed with an ounce and a half of peppermint water, two drachms of ammoniated tincture of valerian, and two drachms of sulphuric ether, of which mixture the dose is a table-spoonful every second hour. When given in a clyster for the cure of flatulent colic, it often operates like a charm. For this purpose two drachma may be mixed with a pint of warm gruel.

Its internal use is improper in inflammatory habits.

BALSAM OF CAPIVI OR COPAIVA

This balsam has of late years got much into use in a variety of

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disorders. The tree from which it is obtained by excision is a native of South America, and the Spanish West India islands, where it grows in great plenty. The capivi balsam is stimulant, diuretic and laxative, and seems to act most powerfully on the urinary passages, and on the internal or mucous membrane of the bowels and windpipe. It is, therefore, useful in *the whites*, and in that state of the womb sometimes occurring on the final cessation of the menses, which is accompanied with a thin unhealthy discharge, great bearing down, and many of the symptoms of incipient *cancer*.[1] It affords considerable relief in *piles* from relaxation, and in *old coughs*. It has been recommended in *consumption*, but in the majority of these cases its heating and irritating qualities will certainly render it injurious. Elderly persons are often troubled with weakness and irritation in the larger bowels, in which case it may prove of much service.

The dose is from twenty drops to a drachm or two, twice or thrice a day, either dropped on sugar, or mixed with soft water by means of mucilage of gum arabic. Its taste is nauseous, and it may be taken in the form of pills, by rubbing together two parts of copaiva and one part of carbonate of magnesia, and leaving the mixture for some time at rest, until it becomes solid, when it may be rolled and divided into pills. If the copaiva be genuine, this mass remains diaphonous. But the most agreeable and best mode of taking copaiba and cubebs is in the *saccharated capsules*, sold by Jozeau, 49, Haymarket. Thus, the nauseous taste is covered.

A considerable quantity of the copaiva sold in England is entirely *factitious*, and I am afraid it is not an easy matter to get it pure. As above remarked, this balsam is a natural production, obtained from trees growing in South America; yet a curious trial took place some times since between the owner of certain premises that were burnt down, and the Governors of the Sun Fire Office, in consequence of the latter refusing to indemnify the proprietor for his loss, because the fire had been occasioned by his *making* Balsam of Capivi.

1. *See* the author's *Treatise on the Diseases of Females.*

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BALSAM OF PERU

The tree producing this medicine is a native of the warmest provinces of South America. The balsam is stimulant and tonic, and is of use in *chronic coughs, whites, palsy* and *chronic rheumatism;* but it is improper wherever any inflammatory action is present. As an external application, it is employed with advantage in cleansing and stimulating foul and indolent *ulcers*. Dr. Ainslie recommends it as a very efficacious application in *incipient mortification* of the limbs occurring in tropical climates. A piece of lint, large enough to cover the whole of the affected part, is dipped into the balsam, and laid on immediately that the gangrene is perceived, and renewed night and morning.

The dose is from ten drops to a drachm, twice a day, in milk.

BALSAM OF TOLU

This is obtained from the same tree as the preceding, and may be considered as the white balsam of Peru, hardened by exposure to the air. Its virtues and dose are similar to the Peruvian balsam, but it is less stimulating.

The Tolu lozenges are made by mixing together eight ounces of fine sugar, one ounce of cream of tartar, two drachms of starch, and a drachm of the tincture of balsam of Tolu of the Edinburgh Dispensatory, which are brought to a proper consistence, and formed into lozenges, by means of a sufficient quantity of mucilage of gum tragacanth.

BARK

This heroic medicine, which was formerly called the Peruvian or Jesuit's bark, is now almost always by distinction called the Bark. The Latin name for it is *Cinchona*, and there are three varieties in common use, *viz*. the yellow, pale and red bark. The yellow bark is that which is now most frequently used by medical men in this country.

It is well known that the tree producing this medicine is a native

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of South America, whence the bark was first introduced into Europe about the year 1640, by the Countess of Cinchon, who, it is asserted, was cured by it of a severe ague, and who was the wife of the Count of Cinchon, Viceroy of Peru. It was sold at first by the Jesuits for its weight in silver, and was consequently very little used; till Talbot, an Englishman, brought it into vogue by the many cures he performed by it in France, under the name of the *English Remedy*. This remedy was an infusion of the bark in Port wine; and so successful was Talbot's practice, that Louis XIV. was induced to purchase at a large price the secret of his specific; and Charles the Second afterwards appointed him one of his physicians. Long since this period, however, warm controversies have at different times been carried on respecting its virtues; and the most injurious consequences have been attributed to its employment, even by respectable physicians! And it is not a little singular and lamentable, that, according to Baron Humboldt, the present people of South America have the most inveterate prejudices against the employment of the different kinds of *cinchona*; and in the very country where this invaluable remedy grows, they try to cut off the fever by infusions of scoparia *dulcis*, and hot lemonades prepared with sugar and the small wild lime, the rind of which is equally oily and aromatic.

In England, the bark is now universally allowed to be a powerful and permanent tonic, superior to all other remedies in counteracting the diseased actions of *intermittent fever*, and of eminent utility in restoring strength and vigour to the human frame, when weakened by *hectic, remittent or typhus fever, periodical pains* and *acute rheumatism*. A striking circumstance with respect to its operation is, that those diseases are most benefited by it, the exacerbation, or increase of which returns at stated periods; among which we find ague and hectic fever, and often head-ache and other pains, hysterics, epilepsy, and acute rheumatism. In the lower stage of remittent and typhus fevers, (particularly when these are attended with symptoms of putridity, as in jail-fever, putrid sore throat, malignant scarlet fever, confluent small pox, and in putrid measles) the bark must be regarded as often a valuable remedy; and the best adjuncts in these cases are the diluted sulphuric, or the muriatic

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acid, or the tincture of cayenne pepper. It is likewise useful in some cases of gout, and in the termination of acute diseases, when the patient is certainly recovering. Should it fail in the cure of ague when used alone; it will often perfectly succeed if infused in Port wine, or mixed with strong brandy and water. The compound tincture of bark is also a useful addition to the decoction and powder.

In indigestion it is not of so much service, being generally in that complaint inferior to the purer bitters, as the chamomile, gentian and calumba.

It is given in the form of powder, decoction, infusion or tincture. The form of powder is that which is in general the most efficacious, but the compound tincture is without doubt an elegant and effectual preparation, being the same as the celebrated tincture of Huxham, who generally gave it in agues and low nervous fevers, in diluted wine or water, with ten drops of the elixir of vitriol in each dose. The dose of the powder is from ten grains to two drachms. In ague, large doses are required even at the commencement; but in other diseases, fifteen grains are sufficient to begin with, which may be repeated every two, three or four hours, and gradually increased to a drachm. Its taste is best covered by milk, or a strong solution of liquorice, and the dose should be taken directly after it is mixed. The dose of the decoction and infusion is from two to three ounces, and of the compound tincture from one to three or four tea-spoonfuls in water.

There is a concentrated preparation of bark lately brought into notice, called *sulphate of quinine*, which is of great service, and which I have noticed m alphabetical order.

BATTLEY'S SEDATIVE LIQUOR OF OPIUM

This medicine is similar in its nature and effects to the "*Black Drop*. It is, perhaps, a still milder and more valuable preparation of opium than the *Black Drop*. The dose is from twenty to forty drops, in any agreeable liquid.

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BEAR'S WHORTLE-BERRY

This medicine is also called *bearberry* and *trailing arbutus*. It is astringent and tonic, and is sometimes of much service in *gravel*, *ulceration of the bladder*, and urinary passages, and when there is an inability of retaining the urine, in consequence of relaxation and weakness in the parts concerned. It has likewise been usefully employed in *diabetes* and in *consumption*. Dr. Bourne, of Oxford, has spoken very highly of its virtues in the latter disease. His prescription was ten grains of whortle-berry powder, fifteen grains of powder of cinchona bark, and half a grain of opium, in any aromatic or simple water, thrice a day.

The dose of the powder is from a scruple to a drachm, two or three times a day, in any agreeable vehicle; but it often disappoints the expectations of the medical practitioner from the difficulty of procuring it of a good quality. It ought to have a dark green colour, whereas that usually sold by druggists looks more like dark sand than the powder of a green herb. In this state there can be no doubt of its being quite worthless.

BELLADONNA

Or Deadly Nightshade, is an active poison, and wholly unfit for domestic practice. It has been extolled as a remedy in hooping-cough, but a combination of rhubarb and ipecacuanha is a better medicine. I have a mean opinion of its medicinal virtues, but a belladonna plaster is sometimes useful in relieving pains in the chest and other parts. It has been praised by homoeopaths as a preventive of the infection of scarlet fever, but there is no solid foundation for such an opinion. In this respect, it is as worthless as powder of post.

BI-CHLORIDE OF MERCURY

Contains twice the proportion of chlorine that calomel does. In large doses, this very active medicine is a violent poison; but in small portions it may be used with safety, and often with the greatest

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advantage in the cure of diseases. The illustrious Boerhaave has remarked that in the hands of those who know how to employ it, it will sometimes cure obstinate diseases which are not curable by and other remedy, and this I fully believe. In small doses it is a powerful tonic and alterative, and is frequently very beneficial in severe *cutaneous affections, chronic rheumatism, swelling of the bones, scrophula,* and various local indurations and ulcerations which depend upon a deranged state of the general health. Sir Astley Cooper strongly recommends it in *scrophulous enlargement of the mesenteric glands* and glands of the neck, indolent enlargements of the joints, and scrophulous inflammation of the eyes of a chronic character. His mode of administering it, is to rub two grains of the bi-chloride of mercury in a mortar, with a table-spoonful of distilled water, then adding seven ounces and a half of compound tincture of bark; of which mixture two tea-spoonfuls are given twice or thrice a day, in a little water. In this way it has not the specific effect of mercury, but acts merely as a tonic. The best way, however, to exhibit it is, to give from half a tea-spoonful to a tea-spoonful of the solution of bi-chloride of mercury, according to the London Pharmacopoeia, either in water, or a tea-cupful of the compound decoction of sarsaparilla. This dose may be repeated twice or thrice a day, and the sarsaparilla very much increases its efficacy in diseases of the skin, chronic rheumatism, or disorders of the general health. Whatever way it is exhibited, it should be at all times taken on a full stomach, and its successful operation is much increased by drinking plentifully of diluting fluids through the day, such as barley-water, toast-water, etc. Immediately after breakfast and tea, is a very proper time for taking it.

If it should occasion nausea, griping, or purging, the dose should be lessened, and given in conjunction with laudanum.

When bi-chloride of mercury is taken in over-doses, either by mistake, or designedly as a poison, the beat antidote is white of egg *diluted* with water, which should be given in large frequently repeated doses.

Gowland's Lotion is a solution of *sublimate* in an emulsion of bitter almonds; and it is the active ingredient in *Spilsbury's*

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Anti-scorbutic Drops, Solomon's Anti-impetigines, Green's Drops, Ward's White Drops and other celebrated empirical nostrums.

BISMUTH

The subnitrate or oxyde of bismuth, (formerly called *Magistery of Bismuth* is a tonic and antispasmodic medicine of uncommon efficacy in many cases of *indigestion*, where pain in the stomach is a prominent symptom. It is also of peculiar efficacy in that disorder when accompanied with frequent rejection of water from the stomach; and in spasmodic affections, such as *epilepsy*, *palpitation of the heart* and *spasm of the limbs*. The extract of hop affords an excellent means of making it into pills, as in the form No. 103A. The dose of bismuth is from two to six or ten grains, twice or thrice a day. I have usually found four grains, as a dose, quite sufficient.

It has lately been recommended on the continent as a valuable remedy in *Cholera*.

The *subcarbonate of bismuth* is strongly recommended as a substitute for the nitrate, but I cannot say that I have yet found it superior to the old preparation. It is a valuable new remedy; is soluble in the gastric juice; its action is rapid; it produces no sensation of weight at the stomach; it rarely constipates, colours the stools less than the nitrate, and may be employed for a long time without oppressing the stomach. The subcarbonate appears to act as a sedative during the first days of its employment and subsequently as a tonic. All cases of gastralgia, or chronic inflammation of the digestive organs, cases m which the tongue is red and pointed, and cases in which the digestion is laborious and accompanied with putrid or acid eructations, or in which there is a tendency to diarrhoea, or spasmodic vomiting, are benefited by the employment of the subcarbonate of bismuth. It is also valuable in the vomiting of children, whether caused by dentition, or succeeding frequent fits of indigestion, and in the diarrhoea of weak children, especially when occurring at the time of weaning. One great advantage possessed by the subcarbonate of bismuth is, that it neutralises the acids in excess which are found in the stomach.

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The *subcarbonate of bismuth* is perfectly insipid, and excites no repugnance. It is best taken before meals in a little water, or milk, or milk and water. The dose for adults is from fifteen to forty-five grains, taken twice or thrice a day. The dose for infants is from one to five grains.

BLACK DROP

This is a preparation of opium, which has long been sold as a *nostrum*. It is powerfully anodyne, and antispasmodic, producing the ordinary effects of opium, without affecting the head, or confining the bowels. For general use it is certainly preferable to laudanum or solid opium, but is not superior to *Battley's Solution of Opium*. The secret of its preparation has never been discovered till lately, when the manuscripts of the late Edward Walton of Sunderland, one of the near relations, it is said, of the original proprietor, fell into the hands of the late Dr. Armstrong, who has published the manner in which it is prepared, which is as follows: take half a pound of opium sliced, three pints of good verjuice, (juice of the wild crab), one and a half ounce of nutmegs and half an ounce of sffaron. Boil them to a proper thickness, then add a quarter of a pound of sugar, and two table-spoonfuls of yeast. Set the whole in a warm place near the fire, for six or eight weeks; then place it in the open air till it becomes a syrup; lastly, decant, filter, and bottle it up, adding a little sugar to each bottle.

The ordinary dose of the Black Drop is twelve or fifteen drops, one drop being equal to three of laudanum. But it is often given to the extent of twenty or thirty drops at a dose.

BLUE PILL

The mercurial pill, usually called Blue Pill, is a mild and valuable alterative of great service in *disorders of the digestive organs*, and also in many severe diseases, both external and internal, which originate in congestion or obstruction. It was the favourite remedy of that celebrated but eccentric man, Mr. Abernethy, whose recommendation of it has been the principal cause of its high repute

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in the present day. He employed it in almost all cases of disease, whatever were the character, stage, or peculiar circumstances of the malady; but he was far more cautious in its exhibition than the generality of his followers, for under his directions it was always taken in small doses, and never became injurious. It is, however, a mistaken notion to suppose that it is generally applicable to the stomach and bilius complaints, which are so frequently met with in medical practice. Many of such cases are of recent origin, accompanied with a considerable share of remaining strength of stomach, and often with some local malady, and then the good effects of the blue pill are frequently, very striking; but a great number, perhaps the majority of them, are of some continuance, the stomach being in a very weak, as well as disordered state, when this medicine will often fail to procure any advantage, and if persisted in, will prove very detrimental. According to my experience, if that sensible and important organ the stomach is much enervated, and rendered very irritable from some primary affection of its coats, the blue pill will very generally fail of affording relief; but when its disorder is secondary, and dependant chiefly on previous disease in the bowels, liver, or other abdominal organ, it will frequently work wonders, if judiciously exhibited. It ought to be observed, however, that, as a general remedy, for the correction of internal chronic disorder, or the care of external disease, it is by no means so eligible and efficacious as a combination of calomel, antimony, and guaiacum. *See* the prescription No. 98.

The ordinary dose is five grains every night at bed time; but it is often advisable to limit it to three grains every night, or four grains every other night. Mr, Abernethy frequently did not advance beyond two grains and a half, or three grains every second night. Some physicians think, that a grain, or a grain and a half, combined with the same quantity of extract of hemlock, repeated twice or thrice a day, is in general preferable to administering the same quantity in a single dose, at night, and, no doubt, there are instances in which this plan ought to be preferred.

In all instances, its efficacy is greatly a augmented by combining with it small closes of tartarized antimony. The form

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No. 99, (*Collection of Prescriptions*). I have found of uncommon service in numerous instances.

BLUE VITRIOL

Blue vitriol or sulphate of copper, is powerfully emetic in the dose of five or six grains in water; and astringent in the dose of a quarter of a grain, combined with extract of logwood. In doses of from two to twelve grains, dissolved in two ounces of water, it operates almost instantly as on emetic, and is, therefore, an eligible medicine to excite vomiting when laudanum has been swallowed as a poison. A solution of it in water is a very beneficial application to indolent and foul ulcers, which it stimulates and cleanses, and thus promotes their healing. In the *dose* of a quarter of a grain, or even half a grain, mixed with extract of logwood, it is efficacious in diarrhoea and dysentery.

BORAX

This is a sub-borate of soda. The natural salt is found chiefly in Persia and Thibet. The preparation commonly in use is the *Honey of Barax*. This is a cooling, cleansing application to the tongue and fauces in thrush. Dissolved in water, in any agreeable proportion, it proves an excellent gargle in those affections.

BROMIDE OF POTASSIUM

Resembles in its effects the iodide of potassium, and is given in scrophula, enlarged liver and spleen, fibrous tumours and some skin diseases. It acts as an alterative, lessens irritation in the mucous membranes of the digestive organs, promoting healthy secretions from the skin. The *dose* is four or five grains in distilled water, twice or thrice a day.

BROOM ASHES AND TOPS

Broom tops are a powerful diuretic, and they likewise often act at

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the same time by stool, and are, therefore, of much service in *dropsy*. The best form of administering them is in decoction, made by boiling an ounce of the green tops in a pint of water, down to half a pint. The proper dose of this decoction is two table-spoonfuls, which, with twenty drops of sweet spirits of nitre put into it, may be taken every second or third hour till it operates freely. It is a convenient as well as useful medicine for the poor afflicted with *dropsy*. Dr. Cullen says it seldom fails to operate both by stool and urine, and by repeated exhibition every day, or every second day, some dropsies have been cured. Dr. Paris also strongly recommends it, having frequently exhibited it in the Westminster Hospital with very great success.

Sydenham, and other old writers, were in the habit of recommending the broom ashes, and they are no doubt useful, but are neither so convenient nor efficacious as the decoction of the tops. A quotation from Sydenham will be found under the head of *Dropsy*.

BUCHU LEAVES

The buchu is a plant whose leaves much resemble senna, and is a native of the Cape of Good Hope. Its leaves have long been considered by the natives of the Cape a sovereign remedy for chronic disorders of the bladder, and have recently enjoyed much confidence among British practitioners.

They are warm, aromatic, diuretic and sudorific, giving tone to the stomach and constitution in general, at the same time that they prevent the formation of *red* gravel. The usual mode of prescribing them is in the form of infusion; but the tincture of the leaves may be used. The dose of the infusion is an ounce and a half or two ounces; and of the tincture, from one to four drachms, in water, twice or thrice a day. The infusion is made by pouring half a pint of boiling water on half an ounce of the buchu leaves, and, after allowing them to stand four hours, straining it through a linen rag.

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BURNT SPONGE

This article is prepared by cutting sponge into small pieces, then burning it in a covered vessel until it becomes black and friable, when it is rubbed to a very fine powder. In this state burnt sponge is beneficially employed in the cure of *bronchocede*, or *Derbyshire neck*, and other *scrophulous swellings*. If persevered in, it will almost always reduce the size of such enlargements, and will sometimes perfectly cure them; but it is liable to produce a considerable degree of debility, and emaciation, and should therefore, when practicable, be combined with Peruvian bark. In such a combination, it is often of great service in reducing the size and mitigating the pain of enlarged and diseased testes. It seems to derive its efficacy from the iodine it contains.

The dose is from one to two drachms, twice a day, mixed into the form of an electuary, with powdered cinnamon, Peruvian bark, and honey or treacle.

The purchaser should be careful in procuring this article, as some druggists have been known to substitute for it charcoal powder.

CADMIUM

The *Iodide of Cadmium* is a new preparation possessing all the advantages of iodine, iodide of potassium, or iodide of lead, without any of the inconveniences attending the use of these preparations. One drachm mixed with an ounce of lard, forms a perfectly white and soft ointment, which produces but little local action upon the skin, and appears to be readily absorbed when properly applied with friction. The size of a nut rubbed into enlarged glandular swellings, or swelled joints, night and morning, is soon found to relieve pain and inflammation, and reduce the swelling.

CALOMEL

This celebrated article is prepared from a mixture, made, according to certain rules, from purified quicksilver, sulphuric acid, common

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salt, and muriate of ammonia. It was formerly considered to be a muriate of mercury, that is, muriatic acid united with mercury, but is now ascertained to be a chloride of that metal, that is, chlorine, combined with mercury. It has been known in pharmacy for upwards of two centuries, is the most useful of the preparations of mercury and is more generally employed than almost any other remedy in the whole range of the materia medica. It is purgative and antispasmodic, but its most useful properties are those of an alterative and deobstruent, in which, as well as in its influence in checking the progress of *acute inflammation*, its powers are commonly of the highest value, and are almost unrivalled. As an alterative and deobstruent, (or remover of obstructions), it is employed with great advantage in *indolent inflammation of the liver, eruptions on the skin, glandular enlargements, diseased joints*, and in very many other complaints; when it is generally combined with guaiacum and some antimonial preparation, by which its efficacy is much increased. Indeed; so great is its power of altering a diseased condition of action in the smaller vessels of the circulating system, in which morbid action very many diseases originate, and really consist, that there are few chronic complaints in which this mineral may not, at some time or other, either singly, or in combination, be exhibited with much benefit.

In almost all acute inflammations, it is of eminent utility after bleeding, and is, perhaps, more to be relied on than any other remedy, (except tartar emetic), particularly in *inflammation of the brain*, in children, vulgarly called water in the head. In all the acute inflammations of tropical climates it is, perhaps, unrivalled in efficacy, both on account of the certainty and quickness of its operation.

As a purgative, in doses of three or four grains, mixed with double the quantity of powdered jalap, and repeated twice a week, it is a valuable remedy for worms in children.

But, notwithstanding its admirable properties, there is no medicine which is so much abused both in and out of the profession; for it is daily given in disorders to which it is not, at the time, applicable, and in doses which are highly detrimental. As commonly

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employed, it has been a minute instrument of mighty mischief, and has shaken to their very foundations thousands of excellent constitutions. Too many of the profession have a vast deal to answer for in their unwarrantable employment of this mineral. Indigestion, and what are called *bilious* complaints, are now extremely common in Great Britain, and for these calomel is considered a sovereign remedy. When the seat of the disorder is chiefly in the liver and bowels, very small doses of it are often employed with great advantage, but in large quantities it rarely fails to be injurious. When, however, the stomach is principally affected, neither calomel nor any other mercurial preparation is either a suitable or safe medicine; yet nothing in medical practice is more common, than for both calomel and the blue pill to be given in considerable doses to patients labouring under severe stomach complaints. In such cases its usual effects are greater loss of appetite, emaciation, debility, lowness of spirits, and general nervous irritability.

It has been fashionable for mothers to give their children calomel, even on common and trifling occasions a very mischievous practice, which—cannot be too forcibly condemned. It is, undoubtedly, of great benefit in the disorders of infancy and childhood, but it is too active a substance for a mother to administer upon her own opinion, especially beyond the dose of a quarter of a rain. It should never be forgotten by mothers, that when skilfully employed it is capable of accomplishing the most desirable purposes; but in the hands of the unskilful it quickly becomes a deadly weapon, producing great weakness of the whole digestive tube, general irritation, and emaciation, with other alarming symptoms, which are, for the most part, more or less permanent, on account of the peculiar activity of this mineral.

As an alterative in chronic disorders, the dose is from the. twelfth of a grain to a quarter of a grain every other day, or once a day, in conjunction with antimony, etc., as in the pill No. 98, or 98A. Under the heads of INDIGESTION and LIVER COMPLAINTS, and in other places, I have remarked on the proper mode of administering calomel, and therefore shall here only lay it down as a very important rule, that IN ITS USE IT IS A GREAT OBJECT TO PRODUCE AS LITTLE IRRITATION AS POSSIBLE. Should it irritate the bowels, a little

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opium or Dover's powder must be added; should it occasion general restlessness and nervousness, the dose ought to be lessened, and if these effects continue several days notwithstanding the attempts to relieve them, it is a clear indication that it is injurious. I have shown in a note, under LIVER COMPLAINTS, the extraordinary susceptibility of some constitutions to the action of mercury.

In acute inflammations, it should be given in doses of a grain or two every second, third, or fourth hour, combined with the same quantity of Dover's powder, to prevent its running off by the bowels. In hot climates six grains, at a dose, are said to be frequently required, but I do not believe it. If it is likely to succeed in the acute diseases of warm climates, it will work salutary changes in the smaller doses of two or three grains. Thousands of constitutions have been irrecoverably ruined by it in those climates. As a purgative, the dose is from two to six grains, united with rhubarb and jalap, or compound extract of colocynth. When used for general purposes in the disorders of children, any quantity beyond a a quarter of a grain is a large dose, and all quantities above two grains may be considered large in adult cases. Many respectable medical men use it freely, and commonly in doses of three, four and five grains in children's complaints, as well as in those of adults; but, in my opinion, this is a practice unscientific unnecessary, and injurious.

CALUMBA

Calumba or Columba root comes from the eastern part of southern Africa, and is one of the most valuable bitter tonics and stomachics we possess. It possesses little stimulus or astringency, and is, therefore, particularly adapted as a tonic to cases of *pulmonary consumption, hectic fever,* and *indigestion.* It is often of great service in the latter stage of diarrhoea, bilious remittent fever, cholera morbus, and childbed-fever. It also allays the nausea and vomiting which accompany pregnancy. Some eminent physicians of the present day hold it in high esteem.

The dose of the powdered root is from fifteen grains to half a drachm, repeated three or four times a day. The infusion of columba

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is also frequently given, but it soon spoils; the dose is an ounce and a half, to two ounces.

CAMPHOR

The greater part of the camphor brought to Europe is obtained in Sumatra, and is produced by many plants of different kinds. It is a stimulant, disposes to sleep, and determines to the surface of the body. In moderate dose it operates as a cordial, increases the heat of the body, exhilarates, and softens the pulse: in larger doses, it allays irritation and spasm, abates pain, and induces sleep. As a stimulant, it is beneficially employed in *typhus fever, putrid sore throat, malignant measles,* and *confluent small pox.* It is sometimes useful in spasmodic affections, as *hysterics, epilepsy, St. Vitus's dance,* and also in *painful menstruation,* and *worms.* If sleep is required by a patient, and opium disagrees, or is improper on account of the existence of inflammation, camphor may often be given with with advantage, in doses of six or eight grains.

It is used with considerable effect, dissolved in oil or spirit of wine, for allaying rheumatic and muscular pains; and with the addition of laudanum, as in No. 39, it is occasionally of great efficacy, when rubbed on the abdomen, in flatulent colic, dysentery, and looseness. Two drachms of camphor dissolved in an ounce of oil of turpentine, form a remedy in high repute in tooth-ache, which, put into the hollow of a carious tooth by means of lint, will afford almost immediate relief.

The dose of camphor is from three grains to a scruple, which should be repeated, in general, at short intervals, as its effects are apt to be transient. The bad effects of an over-dose are most effectually obviated by opium.

CASCARILLA

The tree producing the cascarilla bark is a native of the Bahama Islands, and is found also in Jamaica. It is a valuable tonic, possessing aromatic qualities, and is of much service in *indigestion,* the latter stages of *dysentery,* and *looseness,* and in general debility,

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from whatever cause arising. Its aromatic qualities render it an excellent adjunct to the bark, in *intermittent* and *remittent fevers,* making it to sit easier on the stomach, and increasing its efficacy. Dr. Underwood recommends it in the *gangrenous* or *black thrush,* peculiar to children.

The dose of the powder is from twelve grains to half a drachm, two or three times a day. The infusion of cascarilla is a convenient preparation, of which the proper dose is three or four table-spoonfuls.

CASTOR

This substance is secreted by the beaver, in bags near the rectum. It is antispasmodic, and seems to act more particularly on the womb and its connections. It is supposed to be given with advantage in *hysterics, epilepsy, low fevers,* and spasmodic affections generally. Some medical men appear to have considerable confidence in its powers, but they seem to me doubtful. It is a scarce and high priced article, and is with difficulty obtained unadulterated.

The dose of the powder is from ten grains to a scruple, made into a bolus with conserve of roses. The dose of the tincture is from one to two drachms.

CASTOR OIL

The plant which yields this oil is a native of the East and West Indies, South America and Africa. When good, it is thick, viscid, transparent and colourless, or of a very pale straw colour.

It is a mild purgative, operating very quickly, and with so little irritation as to render it peculiarly fitted for cases in which the stimulating purgatives would prove hurtful, as *piles, Devonshire colic, inflammation of the bowels,* and all-states of *costiveness* connected with great weakness and irritability of the bowels. It is an excellent purgative for infants and children, and for women in child-bed. But in obstinate constipation, where copious evacuations are required, it is not to be trusted, as it will insinuate itself through

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the intestinal canal, bringing with it a small portion of the more fluid contents, but leaving behind it the collection of indurated faeces.

The dose is from three tea-spoonfuls to two table-spoonfuls, either floated on a little water, and covered with a small quantity of any ardent spirit; or diffused in a cup of coffee; or in water, by adding to it mucilage of gum arabic, or the yolk of an egg. The addition of one or two tea-spoonfuls of some aromatic tincture, as tincture of cardamoms, occasions it to sit easier on the stomach. One of the most agreeable ways of taking it is to rub the dose of castor oil in a mortar with the yolk of an egg, and then add two or three table-spoonfuls of cinnamon or peppermint water.

CATECHU

The tree which yields this article grows plentifully in Hindostan. The catechu which is commonly in use, is in the form of an extract, and was formerly called Terra Japoniha, from the supposition that it came from Japan, and was an earth. The dark coloured is the best. It is one of the most valuable astringents, and is used with the best effects in *bleeding from the anus or womb, whites, obstinate coughs,* which depend on weakness and relaxation, and in *dysentery* and *looseness* when the employment of astringents is admissible. The slow solution of a small piece of it in the mouth, is a certain remedy for' relaxation of the uvula and fauces It is an excellent astringent in sponginess of the gums, and equal parts of it and Peruvian bark, with one-fourth the quantity of powdered myrrh, form a valuable dentifrice in such cases. It should not be used in combination with any alkaline or metallic salt, nor with a solution of isinglass.

An ointment composed of four ounces of extract of catechu, five drachms of alum, four ounces of white resin, and ten ounces of olive oil, with a little water to bring it to a proper consistence, is in great repute in India as an application to ulcers.

The dose of catechu may be from ten grains to a drachm. The tincture is a very good preparation; the dose from one to three drachms.

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CARBONATE OF SODA

This medicine is antacid, diuretic and sedative. It is efficacious in the removal of obstructions of the digestive organs. In disordered states of the digestive functions, it frequently acts with good effect, by neutralizing the morbid acidity present. There is scarcely any medicine in such common use in indigestion, and general debility, in which cases it is usually combined with bitters and tonics, as infusion of gentian, columba, or cascarilla, etc. Indeed, if we may judge from the frequency with which we witness professional men prescribe the carbonate of soda, we must regard it as a most valuable remedy; and of general utility in the circumstances just adverted to, and also in other eases. But there are few medicines frequently employed which are more debilitating to the stomach, and through it to the whole frame. Therefore, instead of being a medicine which may be safely prescribed; and taken frequently, it is one requiring great discernment for its safe prescription, and which should scarcely ever be employed largely and freely. It certainly often affords great present relief in disorders of the stomach, by neutralizing the acidity, but this should not deceive the patient, for if he takes it frequently, he will find his stomach weakened, and the intervals between his attacks shortened. I have known it extremely injurious to many persons. It has great palliative effect in *red gravel,* and sometimes in *gout.* When used in conjunction with tartaric acid and water, it forms soda water, which is a cooling, grateful, and very useful draught in all acute fevers.

The *dose* is from six grains to half a drachm, once or twice a day, in water, or infusion of calumba : the addition of ten drops of tincture of ginger to each dose is sometimes advisable. When we wish to give it in pills, the dried carbonate must be used.

CARBONATE AND BI-CARBONATE OF POTASH

The virtues of these salts are similar to those of the carbonate of soda; but the salts of potash act more especially on the kidney, and the salts of soda on the liver. In the formation of saline draughts, the potash has the superiority. The effervescing saline draught, of

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so much service in all fevers, is made by mixing a scruple of carbonate of potash with a table-spoonful of lemon juice, or fifteen grains of citric acid, and three or four ounces of water, which may be sweetened with syrup or sugar. This effervescing draught is very useful in great irritability of the stomach. Bi-carbonate of potash is considered one of the best remedies in acute rheumatism. The ordinary *dose is* from ten grains to one drachm, in a large wine-glassful, or, what is better, two wine-glassfuls of water, two or three times a day.

CHAMOMILE FLOWERS

Are tonic and carminative, and are useful in indigestion, gout, green-sickness, flatulent colic, and chronic weakness of the stomach and bowels. In such cases they are best given in the form of a cold infusion, or tea, in combination with ginger and carbonate of soda. The warm strong infusion is emetic. The extract of chamomile flowers is an excellent stomachic, possessing little stimulus, and favouring the natural action of the bowels, and is, therefore, a convenient and useful addition to other tonics which we wish to give in the form of pills, as preparations of iron, ipecacuanha, carbonate of soda, etc.

The dose of the powder is from half a drachm to a drachm, twice or thrice a day; of the infusion, from one to two ounces; and of the extract, from ten grains to a scruple.

CHELTENHAM SALTS

The Cheltenham salts usually sold are little else than common *Glauber's salt.* This fact has been confirmed by the experiments of Mr. Richard Phillips, an eminent chemist in London.[1] Good Glauber's salt may be bought for a penny an ounce. The best factitious compound which is vended under the name of Cheltenham salts, is made by rubbing together the following articles :

1. See *Annals of Philosophy*, No. 61.

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Best Glauber's Salt	120	grains.
Best Epsom Salt	66	grains.
Best Common Salt	10	grains.
Best Sulphate of Iron	½	grain.

This compound may be kept in a stopper bottle for use, provided the salts are first deprived of their water of cryst-allization, and in doses of two, three or four drachms, dissolved in water, will prove an efficacious purgative. The majority of physicians consider it superior to the salt actually obtained by the evaporation of the Cheltenham water itself. Two drachms of this mixture, dissolved in a pint of lukewarm water, and taken regularly every morning before breakfast, will be nearly as efficacious as a pint of the Cheltenham water drunk at the spa, if we except the influence of the *medicina mentis,* or the auxiliary power arising from the change of air and scene, early rising, and more correct habits, which most persons participate in who visit that delightful watering place. Both the real and artificial Cheltenham water are often of the greatest benefit in *bilious and liver complaints, costiveness, gall-stones,* and other complaints originating in disorder of the bowels, stomach and liver.

CHIRETTA

This is an intensely bitter substance, lately introduced into medical practice in England, and in its operation and effects is closely allied to gentian, but is perhaps not so constipating. It is a native of India : and is very useful as a stomachic, being especially serviceable in the dyspepsia of gouty subjects.

It is usually given in infusion; the dose being two or three table-spoonfuls, twice a day. The infusion is prepared by pouring a pint of boiling water upon half an ounce of chiretta, which is allowed to stand for two hours, and then strained through linen or calico.

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CHLORIC ETHER

Is a solution of one part of chloroform in five parts of rectified spirit of wine, and is stimulant and antispasmodic. Being a new preparation, it is a good deal employed by medical practitioners as a stimulant in spasmodic complaints, but I question whether it is equal to the old remedy, sulphuric ether. Mankind love novelty, and in the rage for it often forsake an old friend, tried and very valuable, for a new one of which they know little, and which when fully tried is found wanting.

The usual *dose* of chloric ether is from twenty drops to half a drachm, or a drachm, in water.

CHLORIDE OF SODA

The chlorides of soda and lime are of the highest value in preventing the generation and checking the progress of all malignant fevers, and in destroying the offensive odour arising in sick rooms, and from cancerous and other ill-conditioned ulcers. The uses of these articles demand the attention of masters who keep extensive workshops, of coroners, undertakers, etc. and the heads of every family, more especially where the family is large. *See* the articles on *Contagion* and on *Measles.*

The chloride of soda, largely diluted with water, forms also an excellent lotion for ulcers, particularly for those which are offensive and ill-conditioned.

CHLORODYNE

This is a proprietary medicine, discovered by Dr. Browne, which appears to possess very valuable anodyne, sedative and antispasmodic properties. It is given when opium and henbane disagree, as anodyne and sedative in consumption, asthma, cholera, diarrhoea, pains in the joints and many other complaints. Some practitioners declare that it induces a feeling of comfort and quietude not obtainable by any other remedy. The ordinary dose is

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about twelve drops in water, repeated as the pain may require; and the sole manufacturer is Mr. Davenport, 33, Great Russell Street.

CHLOROFORM

This is a colourless heavy liquid, prepared by a certain process from chloriated lime, rectified spirit, water and chloride of calcium. It has a peculiarly agreeable, fruity, ethereal odour. When rubbed on the skin it quickly evaporates, and, if pure, leaves no odour.

Its action when taken internally is narcotic and antispasmodic, like that of ether; but it has a more distinctly marked sedative effect, and in large doses it diminishes sensorial power, and produces drowsiness, without exhilaration or acceleration of the pulse. It has been employed in spasmodic affections, such as spasmodic coughs, asthma, and cholera, and also in insanity; but we do not yet know enough of its powers to say much in favour of them.

Its chief employment is in the form of vapour, for the production of insensibility during severe labour, or surgical operations; and also during the passage of gall-stones, and in violent attacks of colic, in which its use has been sometimes followed by great relief. But it requires to be used with extreme caution, and is not at all suitable or safe in domestic practice. Indeed, it cannot be safely administered even by a practised professional man; no one can say whether the patient will survive its administration or not. A young woman in this town has just been killed by it, to whom it was cautiously administered before the extraction of a tooth.

It is in truth a very dangerous thing. A friend of mine who had it employed on himself in the extraction of teeth, began to suffer immediately after from terrific noises in his head, which stuck by him for two or three years, or longer, and which he could not trace to anything but this use of chloroform.

To recover a person from an over-dose, the best treatment is to sprinkle a little cold water on the face, to rub the limbs in the direction of the veins towards the heart,—to open all the windows and let in as much fresh air as possible,—to turn the patient over on his right side, and fan fresh air with a fan on his chest and neck,

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and to place a tea-spoonful of brandy now and then on the tongue. The machinery of the heart is at a standstill, and if we once excite that all is right. Attempts at recovery ought not to be given over for at least two hours.

CINNAMON

Cinnamon bark is an agreeable astringent and cordial, and as such is used with advantage in dysentery and looseness, proceeding from a weakened and languid state of the bowels, and in indigestion and chronic nervous debility. It is of service in discharges of blood from the uterus. It is principally used, however, as an agreeable aromatic adjunct to more powerful articles, as Peruvian bark, etc., which it causes to sit easier on the stomach. The compound powder of cinnamon is a valuable cordial and aromatic's and is given in doses of from eight to twenty grains.

Oil of cinnamon is a powerful stimulant and stomachic, and is used as such in cramps of the stomach, flatulent colic and nervous languor. The dose is from one to three or four drops, on a lump of sugar.

CITRATE OF IRON

This is a new, highly efficacious and very agreeable preparation of iron. It is very much in use among the profession, many of whom prefer it to any of the old preparations. The ordinary dose is from four to eight grains, two or three times a day; which may be dissolved in infusion of orange peel. It has almost superseded the steel wine formerly in use.

CITRATE OF QUININE AND IRON

This salt is now employed very extensively as a general tonic, and is found efficacious in all cases where quinine and its salts, and especially in combination with iron, are applicable. It will be found invariably to agree with the stomach. The energy of the respective bases, quinine and iron, is greatly increased by their union in this

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compound, and this salt seems to exercise a specific action upon the economy. It is admirably adapted to most cases of debility, to ague, and neuralgic pains; and generally where a combination of iron and quinine is required, this is the most efficient preparation. Mr. Bullock's citrate of quinine and iron contains more than double the amount of quinine than many salts now prepared, which therefore can be sold at a lower price; it also differs in chemical constitution, and consequently in its effects on the economy. Dose, two to five grains. The syrup of citrate of quinine and iron is the most agreeable form in which it can be prescribed for children. The dose of the syrup is from half a drachm to a drachm, in plain or spiced water.

CITRIC ACID

Is crystallized lemon, or lime, juice, and may be used dissolved in water for all the purposes for which lemon juice is employed. A scruple of citric acid dissolved in a pint of water, and a little grated lemon peel, and sweetened with sugar, forms *a good lemonade,* and is a cooling refreshing drink. Fifteen grains dissolved in a large wine-glassful, or ale-glassful of water, with a little sugar, and a scruple of bi-carbonate of potash, make an effervescing draught. These acidulated drinks are exceedingly useful for allaying thirst, and as refrigerants in feverish and inflammatory complaints, and in haemorrhages. When our object is to determine to the skin, an effervescing draught composed of citric acid (or lemon juice) and sesqui-carbonate of ammonia is to be preferred.

In the formation of effervescing draughts, the relative proportions of the alkalies, and of citric acid, or lemon juice, is as follows :

Citric Acid	Lemon Juice.	
15 grains, or a table-spoonful		A scruple of Bi-carbonate of potash.
17 grains, or a table-spoonful		Carbonate of potash.
24 grains, or a table-spoonful and a half, dissolved in water		Sesqui-carbonate of ammonia.

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Lemon juice, or citric acid, has long been regarded as a valuable antiscorbutic.

COD'S-LIVER AND NEAT'S-FOOT OIL

Are valuable remedies in *Consumption*, *Rheumatism,* and many other maladies. They both nourish the blood, and increase the weight of the body; and are sometimes exceedingly beneficial in scrophula. The dose of cod oil is a dessert, or table-spoonful, or two, repeated twice or thrice daily. It may be taken on a little ginger wine, or peppermint water, or milk, or spread on toast with pepper and salt, like anchovies. The dose of neat's-foot oil is rather less, about three or four tea-spoonfuls, thrice a day, floated on ginger wine, or sound table beer, water or milk.

When, about seventy-five years since, cod-liver oil was largely used at the Manchester Infirmary, chiefly in the treatment of rheumatism, the medicine was ordinarily given combined with an alkali. The favourite prescription there was twelve drops of solution of potash (liquor potassae), an ounce of cod oil, and half an ounce of peppermint water. Sometimes a little lemon juice was given afterwards.

By improving the general health these oils tend indirectly to restore a natural condition of the bowels. In consumption they expand the pulse, lessen the cough and expectoration, moderate the night perspirations, and frequently supersede the necessity for the use of any other remedy. By securing a healthy nutrition of the whole system, they assist nature to recover from the effects of tubercles in the lungs. *Chronic rheumatism* is the malady for the treatment of which cod-liver oil was first introduced into this country, and for which it has been largely and successfully employed on the continent. The variety of rheumatism in which the oil is most effectual is that in which an impoverished condition of the blood is most visible.

The clearest oil is the best, and the most agreeable, because it is purified from extraneous dirt. I do not recommend the brown oil. The clear scentless oil is easily assimilated, and thus becomes

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a directly life-giving article; and it being a necessary material for the renewal of the body, "we have a satisfactory explanation of the instinctive desire shown by all nations for an oleaginous diet". "Hence", says Dr. Chambers, "under its use, beneficial influences are exerted throughout the whole body; old wounds and sores heal up; the harsh, wrinkled skin regains the beauty of youth; debilitating discharges cease, at the same time that the healthy secretions are more copious; the mucuous membranes become clear and moist, and no longer loaded with sticky epithelium; the pulse, too, becomes firmer and slower—that is to say, more powerful, for unnatural quickness is always a proof of deficient vitality".

Dr. Percival, (see *Works Literary, Moral, and Medical, by* Dr. Thomas Percival, vol. 4, p. 354.) observes,

> "Men and women advanced in years, whose fibres may be supposed to have acquired a degree of rigidity, find surprising effects from it (cod oil). Some who have been cripples for many years, and not able to move from their seats, have after a few weeks' use of it been able to go with the assistance of a stick, and, by a longer continuance, have enjoyed the pleasing satisfaction of being restored to the natural use of their limbs, which for a long time before had been a burden to them. Two cases occurred lately in which the oil had an extraordinary effect, even on young persons, whose ages did not exceed ten years. Guaiacum, calomel, blisters, etc. were tried on both these patients, but with so little benefit that opiates were given merely to procure temporary relief. Their lower limbs seemed to be a burden to them, and they had such an appearance of distortion, that no hopes of relief could be well entertained. In compliance with the particular request of their parents, the cod oil was given. The one obtained a perfect cure, the other nearly so; the latter having a little distortion in his back, it prevented the use of his legs. So general (adds Dr. Percival) has been the use of the oil with us, that we dispense fifty or sixty gallons annually; and the good effects of it are so well known amongst the poorer sort, that it is particularly requested by them for almost every lameness. Except bark, opium, and mercury, I believe no medicine in the materia medica is likely to be of more service, and I should wish for a more general use of it, in order to prove that the above account of its good effects is no exaggeration."

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I can, from personal experience, state that the preceding account is no exaggeration. On the contrary, it falls short of the virtues of this oil, which, in my opinion, is a more efficient article of the Materia Medica than bark, opium, or mercury. I have repeatedly found it to be of the greatest service both to the young and old, in almost all chronic complaints, attended with great debility.

Dr. Theophilus Thompson, the able physician to the Consumptive Hospital at Brompton, has related a well marked case of great improvement in consumption from the use of neat's-foot oil, which will be interesting to the reader.—*Clinical Lectures, in Lancet,* October, 11, 1851—

J. K., a tailor, aged thirty-four, unmarried, square built, of middle stature and dark complexion, was admitted as an in-patient on November 20, 1849; was born in Cork, but had been for fifteen years in London; accustomed to sleep in a close room, and to work in a confined apartment with from forty to sixty companions; always feeling faint and weak in the evening, and occasionally indulging in drinking bouts, which much impaired his appetite; for three years unemployed during the winter months. His brother, who was accustomed to work with him, lately died in this hospital. He lost a sister, aged sixteen, from phthisis, and probably his mother, at the age of thirty-eight. His father is living, aged sixty-one, and a sister, aged thirty-six, with a family of five children.

Treatment—Ordinary diet with eggs, and an extra allowance of milk; cod-liver oil externally and internally. For the cough, blisters were applied, and he took in succession hydrocyanic acid, four minim doses of tincture of aconite in spermaceti mixture, and afterwards morphia, with which gallic acid was combined, with a view to moderate the perspirations; acetate of potash and decoction of broom were also given on account of the oedema.

On the 29th of December he was still unable to leave his bed, and as the symptoms were aggravated, and his weakness increasing, I determined to give a trial to neat's-foot oil, thus combined: two ounces of neat's-foot oil, a drachm of solution of potash, six ounces of peppermint water: of this mixture, an ounce thrice a day. Under this treatment, the pulse, which on the 29th of December was 100, gradually improved, being on January the 9th, 1884, and fuller, and

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on the 4th of February, 1880. At this latter date he was sufficiently improved in strength to go down stairs to be weighed, and was found to be seven stone five pounds and three-quarters. The weight steadily increased, being on February 13th, seven stone six pounds; March 1, seven atone six pounds and a half; March 16, seven stone seven pounds and three-quarters; April 16, seven stone nine pounds and a half. Three grains of tannic acid in infusion of cascarilla were given twice or thrice daily with apparent advantage; the expectoration gradually diminished to half the previous quantity. In the third week of April lie left the hospital, so much improved as to be able to resume his work.

Pale cod-liver oil may be purchased at Keating's, 79, St. Paul's Church Yard, and probably at the other wholesale druggists, at ten shillings and six pence a gallon.

COLCHICUM

This is the meadow-saffron, and is an indigenous perennial plant, (the *Hermodactylus of* the ancients), generally found growing in moist rich meadow grounds, and flowering in September. Its official name is *colchicum autumnale,* and it is well known to be poisonous to animals of all classes. That admirable principle of preservation, called *instinct,* implanted in animals by the All-wise and Beneficent Creator, leads them to avoid the foliage in the fields.

It operates chiefly on the *duodenum,* or first intestine; and its action is that of a purgative, diuretic, and sedative or narcotic. Hence it stimulates the excretory ducts of the liver and pancreas, and the mucous membrane of the intestines, producing copious bilious stools, and diminishing febrile action; but it is a violent medicine, often dreadfully depressing, and therefore unfit for domestic use. Indeed, I have a mean opinion of its remedial powers, and advise it never to be used in a larger dose than fifteen minims of either the vinegar or tincture of colchicum, thrice a day, with fifteen grains of magnesia, half a drachm of sulphate of magnesia, and three table-spoonfuls of cinnamon or peppermint water. It has been strongly recommended in *gout* and *rheumatism;* but in order to its

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being of much permanent benefit in these maladies, it requires to be administered with caution and judgment, or otherwise it will prove detrimental instead of being useful. In gout and rheumatism, its powers, when directed and regulated by a judicious mind, are often valuable as an anodyne, since it allays the tormenting pain of those cruel disorders more speedily and effectually than any other remedy, and in combination with other suitable medicines, may shorten the period of the disease. As just remarked, in such attacks it should not be given alone, and never in large or frequent doses. *See* the prescription No. 80, and the article *Gout.* It operates on the bowels chiefly, and the nerves; and, when taken in excess, it enervates the digestive organs, and has a terrible effect of a depressing nature on the whole nervous system, which is apt to be permanent. *White's Pill,* No. 114A, is one of the best modes of taking colchicum in a fit of the gout.

The dose of the extract is from half a grain to one grain. The wine *(see the Collection of Prescriptions)* is the best mode of administering it; but the tincture may also be given in the dose of fifteen drops, combined with a little magnesia and water.

COLLODION AND CASTOR OIL

Is a mixture used with great success, as an artificial cuticle, in burns and abrasions of the skin, from whatever cause arising. Wherever painful excoriations are produced from the dribbling of urine, or any other cause, this composition will be found of the utmost service, as it forms a smooth elastic coating or varnish, which resists the action of the urine for many hours, and effectually protects the excoriated skin.

The General Apothecaries' Company, 49, Berners Street, prepare a perfectly neutral collodion and castor oil mixture that always succeeds in forming an artificial skin.

COLTSFOOT

This is a well-known indigenous plant, which has been used for centuries as an expectorant in coughs and consumption. It has

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undoubted expectorant and demulcent qualities, and I think the decoction is tonic, and a valuable remedy. It is made by boiling six or eight ounces of the plant in a quart of water down to a pint, of which the dose is two or three ounces, or more, (a tea-cupful), thrice a day. It is very useful in scrophulous swellings and sores.

COMMON SALT

This invaluable article is one of the most abundant productions of nature, being found in almost every country of every quarter of the globe; either existing in mineral springs, or lakes, spread in strata under the surface of the ground, or rising from it into mountains: and to its presence, also, the ocean owes its saltness.[1] The effects of salt upon the animal and vegetable kingdoms are striking and important. It is a natural stimulant to the digestive organs, and seems absolutely necessary to the health of the animal body; for those who neglect it as an article of diet, have a weak and depraved digestion, and engender worms often with a frightful rapidity.[2]

Carnivorous animals are instinctively led to immense distances in pursuit of it; and in the 39th vol. of the *London Medical Journal,* the case of a lady is published who had a natural antipathy to salt, and was, in consequence, most dreadfully infested with worms; during the whole of her life. The principal cause of children being so generally troubled with worms, seems to lie in the pernicious custom of feeding them with a great deal of sweetened food, to the neglect of a daily use of salt.

It is tonic and stimulant. Taken in moderate quantities, it promotes digestion, strengthens the stomach and bowels, assists

1. The salt mines of Williska, near, Cracow, in Poland, are 6691 feet long, 1115 feet broad, and 743 feet deep. Near Cordova, in Spain, is a mountain of common salt, 500 feet high, and nearly three miles in circumference.
2. A mode of punishment formerly existed in Holland, which places the effects resulting from a total disuse of salt, more especially in moist climates, in a striking point of view. The ancient laws of the country enacted that certain convicted men should be kept on bread alone, *unmixed with salt,* as the *severest* punishment that could be inflicted upon them in their moist climate; the effect was horrible, these wretched criminals are said to have been devoured by worms, engendered in their own stomachs.

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the natural action of the intestines, and corrects that weakened condition of them which favors the propagation of *worms. See* a valuable case related under the article on *Worms.* The celebrated Dr. Rush, of America, used to employ it largely and successfully to destroy worms. A saturated solution of it in water, forms a powerful local stimulant, of great service in *tooth-ache,* in reducing the size of *scrophulous* and other *tumours,* and in allaying symptoms of heat, irritation, and pain, attendant on various local maladies. For the relief of such symptoms it is a remedy which will be found of unusual advantage in domestic practice; and being very cheap, and always readily to be procured, I have much pleasure in strongly recommending it to the attention of the public. This solution, when kept constantly applied to the part is, in some instances, equal to the cure of very large or hard swellings.

To act as a tonic the dose of salt may be from twelve to forty grains, two or three times a day.

COMPOUND COLOCYNTH PILL

This pill is a combination of socotorine aloes, scammony, colocynth pulp, sulphate of potash, and oil of cloves, and is one of the most valuable aperients in cases of *habitual costiveness, head-ache, sickness at the stomach,* and other disorders depending upon a deranged and confined state of the bowels. It acts mildly and effectually in doses of three, four, or five grains, taken every night, or every second night; and is still more valuable when united with equal quantities of the compound rhubarb pill, or with a little calomel and James's powder.

COMPOUND POWDER OF IPECACUANHA

This medicine is popularly known by the name of *Dover's powder.* It is frequently referred to in that part of this work which describes the proper treatment of diseases, for it is invaluable in its effects as a remedy to allay pain, determine to the surface of the body, and alter the diseased action of the vessels, in many obstinate complaints. From such operation, it is often of the greatest service

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in *chronic rheumatism,* and all complaints originating in, or connected with, suppressed perspiration, in *old coughs*, and *spasmodic asthma,* and in *dysentery* and *looseness.* In small doses of three or four grains, it operates mildly, safely, and for the most part insensibly; but in doses of eight and ten grains it acts as a powerful sudorific, occasioning profuse perspiration. Where opium is indicated to relieve pain, or procure sleep, it may often be used with still greater advantage than either laudanum or solid opium; since it does not affect the head, or produce such uncomfortable feelings as are frequently the consequence the day after using those medicines. When given in chronic rheumatism, flying anomalous pains, dysentery, or looseness, etc., the best way of administering it is in doses of three grains, three or four times a day, made into a pill with a little conserve of hips; but if the object is to excite a speedy and profuse perspiration, ten grains is the proper dose.

COMPOUND POWDER OF JALAP

Is jalap combined with cream of tartar, and is much milder in its operation than simple jalap powder. It is very serviceable as a purgative, and is particularly useful to children with tumid bellies, in worm cases, and in dropsy. The dose is from one to two scruples for adults, and about half that dose for children, taken in thick gruel or jelly. The cream of tartar mixed with jalap proves alterative to the blood, improving its quality.

COMPOUND RHUBARB PILL

Is composed of rhubarb powder, socotorine aloes, myrrh, and oil of peppermint. It is a warm stomachic, laxative pill, very useful for obviating costiveness, and at the same time giving tone to the bowels in *indigestion*, *gout,* and *hypochondriasis or* low spirits. The dose is from five to ten grains formed into pill and taken once a day. Those who have very weaks bowels, and find a difficulty in procuring any aperient medicine sufficiently mild, will find this pill of great value.

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COMPOUND SQUILL PILL

This pill is diuretic and expectorant, and is given with much benefit in *old coughs, difficulty of breathing,* and *asthma.* It is likewise useful in *dropsy,* in which case its efficacy is almost always increased by being combined with a little calomel. The dose is from five to ten grains, repeated thrice a day.

COMPOUND TINCTURE OF BENJAMIN

This medicine was formerly called Friar's Balsam, and was much used as a stimulating expectorant in *old coughs, asthma,* and *shortness of breath,* and as a healing application to *recent wounds* and *indolent ulcers.* It is, however, an improper dressing for recent wounds, because of its stimulating qualities, and of the separation of the resinous ingredients which takes place on its intermixture with the blood; but it is often efficacious in the case of indolent ulcers, and in chronic coughs and asthma. In the latter cases, its warm balsamic properties render it very grateful and useful to the stomachs of the weakly and aged; and it is not so much employed by medical men as it deserves.

The dose is from thirty drops to a drachm, twice or thrice a day, on a lump of sugar, or in mucilage.

COWHAGE

This medicine is sometimes very efficacious in the expulsion of *worms,* particularly the *round worm.* The best mode of preparing the remedy, is to dip the pods in syrup or treacle, and then with a knife to scrape off the hairs along with the syrup. When the mixture attains the thickness of honey, it is sufficiently impregnated with the hairs, and is fit for use.

The dose of this mixture for a child of three or four years old, is two tea-spoonfuls, given in the morning for three days, and then followed by a brisk cathartic.

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CREAM OF TARTAR

Is a bi-tartrate of potash. It is a valuable purgative, diuretic, and refrigerant. It exerts a marked and salutary influence on the blood, and is-thereby often found to be of the most signal service in *passive* haemorrhages from the lungs, bowels, womb and kidneys. It acts mildly in the dose of half a drachm, twice or thrice a day, in barley water, and is a cooling alterative, especially if combined with half the quantity of sulphate of potash and six grains of nitre.

In combination with sulphate of potash it is an efficacious purgative in dropsy, the ordinary dose being about a drachm, three times a day, dissolved in barley water.

CROTON OIL

The plant yielding the seed from which this oil is expressed, is a native of the Molucca islands, and of the greater part of the Peninsula of India. It is a powerful purgative, which produces watery stools, and operates in a very short time after it is taken. Indeed so active a substance is it, that merely applying the cork of the bottle containing it to the tongue, is sufficient directly to purge some people. It has been given with great advantage in *obstinate costiveness, madness, apoplexy,* and a few other cases in which it is desirable to purge the bowels quickly, and to lessen the quantity of the circulating fluids. But as small doses produce great effects, the utmost caution is necessary in its administration; and it is scarcely ever applicable to the disorders of the aged and weakly. If the oil is genuine, it will usually operate powerfully in doses of one or two drops, but sometimes it is necessary to carry it as far as four or five drops. It may be made into pills with crumb of bread, or combined with thin mucilage of gum arabic and sugar, in the form of emulsion.

CUBEBS

Cubebs is a species of Java pepper. It is diuretic, and slightly purgative, and certainly possesses considerable effect in allaying

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irritation in the urethra, and mucous membrane of the bowels. It has been much and successfully used of late in the cure of gonorrhoea; but my reason for noticing it here is the belief that it will be found of great service in many cases of *weakness, relaxation,* or deficient action in the larger bowels, in which it acts as a mild stimulant and corroborant, that improves the secretion of the parts, and gives a cool sensation to the rectum, in passing the faeces. It will be found useful in piles and whites, and in the chronic affections of other mucous membranes, as in chronic disorder of the bladder, etc.

The best mode of taking it is in powder; in doses of from a scruple to a drachm and a half, four times a day, in water. It is frequently adulterated.

CURTIS'S PASMA, OR HEALING POWDER

Is also an excellent remedy for excoriations, burns, ulcers, and eruptions, and as a prophylactic of abrasions in tender and irritable skins. It is prepared by Messrs. Curtis, 15, Crawford Street, London.

DAFFY'S ELIXIR

This well-known nostrum is made in a manner very similar to the tincture of seena of the London Pharmacopoeia, by macerating senna leaves, carraway and cardamom seeds, and raisins, in proof spirit of wine or brandy. The tincture of senna of the shops will be found quite as efficacious. It is a useful stomachic and purgative, being sometimes very serviceable in *flatulent cholic, chronic gout,* and as an opening medicine for those whose bowels have been weakened by intemperance. In such cases, its virtues are greatly improved by combining it with tincture of rhubarb, in the proportion of one-third of this tincture to two-thirds of the tincture of senna. The combination is often very useful in correcting a confined and disordered state of the bowels in weakly- habits; and, for general use, I consider it more valuable than the true Daffy's Elixir.

The dose of the tincture of senna alone, or combined with the tincture of rhubarb, is from one to two table-spoonfuls, in water.

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DANDELION

Dandelion is aperient, diuretic and alterative. Boerhaave was partial to its employment, and the German physicians appear to have great confidence in its powers in the cure of *jaundice, dropsy, obstructions of the liver,* and *cutaneous eruptions* depending upon disorder of the digestive organs. It is now much used in England, and certainly proves an efficacious remedy in some cases of chronic derangement of the functions of the stomach, bowels, liver and kidnies. The best way of preparing it is to boil half a pound of the sliced root in about one pint and a half of water, down to three-fourths of a pint, of which the dose is four ounces, (a tea-cupful) twice or thrice a day. If a wine glassful of the juice of cliver be added to the decoction of dandelion, its alterative and curative powers are increased.

The recent root is to be preferred, and in the summer the decoction should be made fresh every day. It may also be given in the form of an extract, of which the dose is from ten grains to a drachm, in water, thrice a day. When the medicine is obtained from the druggist, I advise ten grains of the extract to be added to each dose of the decoction. I have known it of extraordinary service in some disorders of the stomach and liver.

In the case of a man at Croydon who suffered for several months from severe pain in the stomach, attended with a puffy swelling at the pit of the stomach, it proved curative. He had received a violent blow on that part, which immediately laid him aside, and its effects, which were loss of appetite and strength, low spirits and pain, drove him into a London hospital, whence he returned almost as bad as lie went, and was subsequently cured by drinking a strong decoction of dandelion which he prepared himself, of which he took a tea-cupful twice a day. *See* another case detailed under *Liver Complaint.*

Since the publication of the earlier editions of this book, I have prescribed the dandelion still more extensively, and have found it to be one of the most valuable resources of physic. Sarsaparilla I have also found an invaluable remedy; but dandelion has succeeded in several cases of severe chronic disorder, (especially where the

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liver was concerned,) after the sarsaparilla had failed to produce any good effect. Soda ought not to be joined with it.

DOVER'S POWDER

See **Compound Powder of Ipecacuanha**

ELIXIR OF VITRIOL

Elixir of vitriol is the aromatic sulphuric acid of the Edinburgh Pharmacopoeia. It is a grateful medicine, and is tonic, antiseptic and refrigerant. Its tonic and antiseptic powers render it extremely serviceable in *low fevers,* of a typhus type, *indigestion, diabetes,* and *cutaneous eruptions.* From its astringent properties it is often of great use in *profuse sweating,* and *internal bleedings,* as from the lungs, bladder, bowels or nose.

Dr. Huxham was fond of its use in low fevers, and it was Sydenham's favourite remedy in *spitting of blood.* In the first mentioned cases, as typhus fever etc., it is usually combined with infusion of bark, gentian, cascarilla, or other vegetable bitters; and in the latter, as internal bleedings etc., with infusion of roses, or mucilage.

It was at one time extolled as a valuable medicine in pulmonary consumption, but is too often injurious in such cases, from the want of information as to the proper time for its administration. In the first and inflammatory stage, it is certainly hurtful; but in the more advanced periods, when an open ulcer exists in the lungs, it may frequently promote its healing, and from its tonic qualities may become otherwise useful.

The dose is from twenty to forty drops, three or four times a day, in any convenient fluid vehicle. To prevent it from injuring the enamel of the teeth, it may be sucked through a quill, and the mouth should be carefully washed after each dose.

EMETIC TARTAR

This is the tartarized antimony, of the shops. It is emetic,

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diaphoretic, expectorant, alterative, rubefacient, and sometimes purgative, according to the dose and manner in which it is administered. It is generally considered to be the most important of the antimonial preparations; and some physicians think that, by proper management, it may be made to supersede the use of all the others, a sentiment in which I cordially unite.

It is given as an emetic in the commencement of *fevers,* in doses of from one to two grains, dissolved in distilled water; but the best mode of giving it is in divided doses, three or four grains being dissolved in four ounces of water, and an ounce of this solution given every quarter of an hour till it operates. It generally excites full vomiting, and is liable to be more harsh in its operation than the milder emetics, such as ipecacuhana, etc. In fever, croup, and many other cases, however, this is an advantage; and in such maladies, as well as in all morbid affections where the stomach is not easily affected, it is the emetic, properly employed; while when the stomach is irritable, where its contents are merely to be evacuated, or where the system is in a debilitated state, the milder emetics, the best of which is ipecacuanha, should he preferred. It is of great efficacy in procuring sleep in fever.

Assisted in its operation by tepid diluting drinks, it may be brought to operate as a diaphoretic, and to produce the effects of antimonials on the general system; relaxing the skin, promoting perspiration, and relieving fever. For this purpose the dose is from one-sixteenth to one-fourth of a grain, every three or four hours; but the most manageable preparation in this case is antimonial wine, (which is emetic tartar dissolved in white wine), the dose being from half a drachm to a drachm, taken in a little warm slop, every four hours.

In the quantity of one-tenth of a grain, it will likewise; operate as an expectorant, when combined with squill, gum ammoniac and camphor. In the same minute doses, united with calomel, it is a powerful alterative in many *cutaneous eruptions, internal obstructions,* and other severe *chronic maladies.*

It is an invaluable remedy in *acute inflammations,* especially acute bronchitis, and inflammation of the brain, and the lungs, or

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other parts within the chest; and so suitable and efficacious a medicine does it often prove in these cases, that it should never be neglected, and will often be found a more powerful remedy in subduing the inflammation than calomel, blood-letting, or any other means usually resorted to in such maladies. The Italian physicians trust to it alone for the cure of pleurisy and inflammation of the lungs, and give it in doses of a quarter or half a grain, dissolved in water, and repeated every second or third hour. In croup it is a medicine of incomparable power, as I have remarked under that head. In fact, it is one of the most valuable resources of the physician.

Being one of the most powerful medicines in exciting the action of the skin, it is found of great service in many cases of *indigestion* and *bilious complaints,* when the skin is dry or harsh, and the tendency to feverish attacks considerable. If, in such cases, this state is associated with a determination of blood to the head, it often proves of signal advantage; and it has nearly an equally good effect in severe nervous agitation arising in protracted cases of indigestion, not depending on any local irritation, the seat of which the patient can point out, but on the state induced by long continued irritation of the brain. In these instances of nervous agitation, about the seventh part of a grain of emetic tartar is the proper dose, combined with twenty or thirty drops of tincture of henbane, and an ounce and a half of rose water, which may be repeated thrice a day. But in the preceding affections, from the tenth to the eighth part of a grain is a sufficient dose.

In all these chronic disorders, it may require to be continued for some time, in order to insure all the effect it is capable of producing. *See* the prescription, No. 98A.

One or two drachms of emetic tartar rubbed in a mortar with au ounce of hog's lard, forms an ointment which, when rubbed on the skin, occasions a pustular eruption, that has proved very serviceable in pulmonary consumption, severe cough, hooping cough, white swellings, obstinate chronic pains, and other diseases in which eternal irritation and a discharge from the neighbouring skin are likely to be beneficial. The attention of medical men was

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first excited to the value of this external application, by the recommendation of the celebrated Dr. Jenner.

Norris's Drops are a solution of emetic tartar in spirit of wine, and disguised by the addition of some vegetable colouring matter. As a remedy in colds and fever, they are in no degree superior to well made antimonial wine.

When taken in large closes, emetic tartar acts as a corrosive poison, producing violent vomiting, hiccough, pain in the stomach, fainting, difficult respiration, convulsions and death. The treatment consists in evacuating the poison by bland, oily liquids freely taken; after which, decoction of yellow Peruvian bark should be immediately administered, with opium.

EPSOM SALT

This salt is a valuable purgative and diuretic, and in general use among medical men for these purposes on all common occasions. It operates readily, without griping; and, notwith-standing its nauseous taste, is generally retained by the stomach when almost all other things are rejected; especially when it is administered in small repeated doses of a drachm, largely diluted with half a pint of water, or united with half the quantity of acidulated infusion of roses. In these forms it is a useful purgative in some cases of *low spirits, costiveness* with internal obstruction, *Devonshire colic*, and in all acute diseases. Its mildness and efficiency of operation are always increased by the addition of an equal quantity of Glauber's salt, when, of course, half the usual quantity of Epsom salt is sufficient; and should the state of the stomach, or the general weakness require its coldness to be obviated, it may be taken dissolved in lukewarm water, with or without the addition of two drachms of tincture of senna. Thus combined, it is often of great service in bilious and liver complaints; indeed, half a drachm or a drachm of each of these salts dissolved in a pint of lukewarm water, and taken every morning, or every second morning, before breakfast, is almost as efficacious in these and other disorders, as the celebrated waters of Cheltenham and Leamington, and as those of Epsom once were.

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By moderate exercise in the open air, while taking thin salt, the purgative effect is diminished, and its diuretic property increased. It is invariably more pleasant and certain in its operation when largely diluted with water.

It is also an efficacious alterative when taken in the small dose of half a drachm every morning in water, but it is not so much employed in this way as it merits. The alterative powder recommended in my volume ON THE DISEASES OF FEMALES, p. 268, in which Epsom salt is combined with cream of tartar and sulphur, is of superior efficacy.

The ordinary dose is from a drachm to half an once, dissolved in tepid water, or in compound infusion of orange-peel or cloves, or any other convenient fluid vehicle. About five or six drops of diluted sulphuric acid added to each dose renders it less nauseous, and sometimes more efficacious. When it is taken to overcome some internal obstruction or disease, it is, in general, best to take it in doses of a drachm or two in three-fourths of a pint of water, which may be repeated every morning, in the same way that the Cheltenham waters are administered. Combined with infusion and tincture of senna, it forms the common black purging draft so much in use on ordinary occasions.

ERGOT OF RYE

Spurred rye, commonly called by professional men ergot of rye, is a diseased production which grows on the ear of rye, barley, and wheat, but most frequently on that of rye. The diseased grain varies much in length, sometimes being perfectly concealed within its husk, at others growing to near an inch and a half; its usual length is about an inch, and its general appearance resembles much the *spur* of the cock.

This substance has been known to possess deleterious and poisonous qualities for more than seven hundred years. If taken in considerable quantity, mixed with the healthy grain, as food, it produces giddiness, spasms, and convulsions, on which gangrene and sloughing of the lower limbs supervene. From this cause, an epidemic raged in the Kingdom of Hesse in 1596, and in both

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Saxony and Sweden in 1648-1649, and twenty years after in Blois and Montarges, in France. In 1777, a similar epidemic from the same cause ravaged Cologne, and its neighbourhood and since that time, in different years, its baneful influence has been more or less remarked in France. Some persons thought the deaths might be owing to great vicissitudes in the weather and temperature, but the various experiments of a M. Tessier, on animals, removed out of the influence of such exciting causes, fully prove the accidents were attributable to the grain itself.

This substance has, nevertheless; been employed on the Continent by female midwives, as a promoter of labour pains for 150 years; and it first attracted the attention of professional men, in consequence of a brief letter of Parmentier to the Editor of the *Journal Physique,* in 1774, wherein he made known that it was frequently used by Madame Depille, a midwife at Chamont, as a child-bed remedy. Its great influence over the uterine system is undoubted, and it now enjoys the utmost confidence amongst French, English and American practitioners. Indeed its action on the womb is specific, and it is almost the only medicine now employed as an excitant of the womb, that is, to rouse the energies of that organ in cases of lingering labour, dependant on its inefficient action.

It is likewise useful in some cases of *leucorrhoea*, or whites, probably in those instances in which the complaint is owing chiefly to a relaxed and disordered condition of the internal surface of the *uterus.* I do not, however, consider it by any means commonly necessary in this complaint—the most powerful remedy here is, in my opinion, the cantharides in large doses. *See* my *Treatise on the Diseases of Females.*

Thus, we see that the Divine Author *of* all good brings good out of evil, and causes that to be of the most essential service to mankind, when *skilfully* employed as a remedy, which is even poisonous in large quantities, and under improper management. The dose of the *ergot* of *rye* in powder (which is of a perfect ash colour), is from five to twenty or twenty-five grains. The ordinary dose is fifteen grains, which may be repeated in a quarter of an

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hour, if the uterine action has not become apparent. It may be given in infusion—two drachms of the ergot may be infused in six ounces of boiling water for twenty minutes, and then strained; of which the proper dose is two or three table-spoonfuls. Of course it should never be used but in cases of decided inefficient action of the womb, in lingering labours, and where there is no rigidity of the parts, nor malposition of the head; and it is rarely admissible in first children.

The cases in which this valuable medicine is useful are well pointed out in the following example, related *by* Dr. Beatty, in *Dublin Medical Journal,* No. xii. (1834).

> Mrs. K— aged thirty-five, pregnant of her fourth child, fell in labour. The pains were slight, the membranes gave way, and the waters drained off. The same state continued next day. In the afternoon the pains increased, and Dr. Beatty was summoned. The pains, however, had now entirely subsided—the head of the child presented, and almost touched the perineum—the month of the womb was dilated, and the parts relaxed. Hour after hour passed, but no recurrence of the pains took place. After six hours absence of the labour pains, he determined to exhibit the ergot of rye. One drachm of the powder was infused in four ounces of boiling water for five minutes. The fluid was then strained through muslin, and a third part of the powder caught on the strainer was mixed with half the fluid, and exhibited to the patient. She had not swallowed it five minutes when the pains came on, with considerable force, and continued to increase in severity and duration, so that at last there was no intermission. In less than twenty minutes the labour was terminated by the expulsion of a living child, followed by the after-birth— the mother did very well.

ETHER

Sulphuric ether is stimulant, narcotic, and antispasmodic, and is sometimes beneficially employed as a cordial in typhus and low fevers, and as an antispasmodic in *spasmodic asthma, hysterics* and *fainting.* It is also employed with advantage in *cholera morbus,* to check the vomiting; and it allays the violence of sea-sickness.

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But its effects are transitory, and, therefore, in all cases the dose must be repeated at short intervals, of an hour or two, to produce the full effect of the remedy.

The usual dose is from half a drachm to two drachms, but it may be given to the extent of half an ounce, in any agreeable vehicle. All ethers must be kept in closely-stopped bottles.

FOXGLOVE

Foxglove (*digitalis*) is an indigenous biennial plant, found growing generally at the sides of hills, or where the soil is dry, sandy or gravelly. It flowers in July, which is the proper time for obtaining a supply of the leaves of this plant, and those only which are fresh should be selected. In its medical qualities, it is sedative and diuretic. It has a considerable influence over the action of the heart, and of the extreme vessels of the circulating system, and is, therefore, often very beneficially employed in *palpitation; dropsy, aneurism,* and *delirium tremens.* It weakens the force of all the vital functions, diminishes the frequency of the pulse, and the general irritability of the system. In palpitation of the heart, accompanied with great nervous irritability, it may be combined with camphor mixture and tincture of columba, and is often very useful.

In *dropsy of the chest,* it is considered by some able physicians to be superior to every other remedy. It is frequently of great service in other kinds of dropsy, especially in the dropsy supervening scarlet fever; and its beneficial effects are more certainly obtained in those constitutions in which there is laxity of fibre, pale complexion, feeble intermitting pulse, cold skin, and where the swelling easily pits. It has also been found of great value, when conjoined with nitric acid, in the dropsy which occurs in broken-down constitutions that have been long harassed by mercury.

It has been much praised for its virtues in pulmonary consumption, but they have been greatly overrated; and those physicians who have chanced to find it beneficial in this disease, have neglected to observe the species and particular state of the constitution in which it is most useful. It is of service in some

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cases, and may have proved curative; but it is probably rarely applicable to any other than the florid species of consumption.

It cannot be advantageously exhibited under the pressure of high arterial action. This is owing to its primary effect as a stimulant. Its subsequent or secondary effects are, indeed, sedative and depressing. Thus, in all cases the inflammatory condition must be reduced by blood-letting, purging, etc. before we can administer foxglove with certain and good effect. Hence in paroxysms of insanity it will act as a valuable narcotic and sedative, provided the inflammatory symptoms be first controlled by the usual means; and hence also it appears fitted lather for the advanced than the early stages of consumption.

It may be given in substance, in watery infusion, or in tincture. When given in substance it is always proper to begin with a dose not exceeding a grain of the powdered leaves, made into a pill, twice a day, it being gradually increased till its effects are apparent either on the kidneys, the stomach, the pulse, or the bowels; the medicine then must be discontinued. But in dropsy it may be repeated after an interval, if the whole of the water be not evacuated. The infusion is made by macerating for four hours a drachm of the dried leaves in half a pint of boiling water, to which is then added, half an ounce of spirit of cinnamon. The dose is from two to six drachms given twice or thrice a day. The tincture contains all the virtues of the plant, and may be given in doses of ten or fifteen drops thrice a day. If foxglove occasions vomiting or purging, it almost certainly fails as a diuretic, and should, therefore, in such cases, be united with a small quantity of opium or opiate confection. In dropsy its efficacy is increased by being combined with calomel; and an occasional dose of sweet spirit of nitre is useful in counteracting nausea and flatulence. During its employment, under any farm, diluting drinks are useful and necessary; and immediately it is discontinued, the strength should be recruited by generous food, steel and cordial tonics.

The deleterious effects of an over-dose are best counteracted by laudanum in brandy and water, and by the application of a blister to the pit of the stomach.

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GAMBOGE

Gamboge is a powerful and active cathartic, and frequently excites vomiting, even in moderate doses. It is sometimes useful in obstinate *costiveness* and *dropsy*, especially in the latter complaint. When given in dropsy, it should be combined with squill and cream of tartar. Used as an occasional medicine for the removal of costiveness, and at the same time to promote a free discharge of urine, the best form is the compound gamboge pill of the shops, the dose of which is from ten to fifteen grains at bed-time.

GINGER

The ginger plant is a native of the East Indies, and is particularly abundant in the mountainous district of *Gingi*, to the east of Pondicherry, whence it derives its name. It is now naturalised to the West Indies.

It is stimulant and carminative, and is useful in *flatulent* colic, and *indigestion,* also in *gout* when it attacks the stomach. Though it has a hot biting taste, it rarely heats the body, though taken to a considerable extent. It is less frequently used alone than as an adjunct to other remedies, to promote their efficacy, and give them warmth. The dose of the powder is from ten to fifteen grains. The tincture of ginger, taken in doses of from one to two tea-spoonfuls in warm water, and sweetened with sugar, is sometimes a useful medicine in weakness of the stomach, to afford relief from a sense of oppression or pain after eating.

GOULARD OINTMENT

See **Collection of Prescriptions**

GLAUBER'S SALT

This is a *sulphate of soda,* and is a very common and useful purgative, whose virtues are the same as those of the Epsom salt. It is given in doses of from one to six drachms, in the same way as

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the Epsom salt; but a combination of these salts, in equal proportions, is, as I have before remarked, more certain and pleasant in operation, than either of them used singly.

It is called Glauber's salt from Glauber, a German chemist, who first prepared it, and who named it *sal mirabile.* The *tartarized soda* was formerly called *sal polycrest,* or salt of many virtues, and these names are not unappropriate, so very efficacious are these mild saline purgatives often found in many complaints.

GLYCERINE

Is the sweet principle of oils produced during the making of soaps. It has been recommended internally in consumption, but I have there no confidence in it. It is usefully employed as an external application in scaly diseases of the skin, and to ulcers, and it has been recommended in deafness.

GREY POWDER

Is a combination of mercury with chalk. It merits attention as a mild alterative for children; the dose being from two to four grains, given at night, mixed in jelly, or thick gruel. It is particularly applicable to affections of the skin.

GUAIACUM

The guaiacum tree is a native of Jamaica, Hispaniola, and the warmer parts of America. Both the wood and the gum guaiacum are stimulant, diaphoretic, and alterative, and these qualities render them of great service in *chronic rheumatism gout, cutaneous eruptions,* and *scrophulous affections* of the membranes and ligaments. Its power of curing chronic rheumatism is well known even to the common people. When the gum is united with antimony or calomel, it very much increases their alterative powers; indeed, a combination of this gum with emetic tartar and calomel, forms one of the most powerful alterative medicines we possess. *See* prescriptions, No. 98.

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The guaiacum wood forms a principal ingredient in the decoction of the woods, which is often a very useful medicine in cutaneous eruptions, rheumatism, and secondary symptoms of syphilis.

The Chelsea Pensioner, a nostrum by which Lord Amherst was cured of rheumatism, is composed of guaiacum, one drachm; rhubarb in powder, two drachms; cream of tartar, an ounce; flowers of sulphur, two ounces; one nutmeg finely powdered; which are to be made into an electuary with one pound of clarified honey. Two large spoonfuls to be taken night and morning.

The dose of gum guaiacum is from ten grains to half a drachm made into pills, or a bolus, with a little conserve of roses, and taken every night, or night and morning. But the *ammoniated tincture of guaiacum is* preferable for general use, of which the dose is from thirty drops to two drachms, or more, repeated three times a day. It had better not be mixed with water as that decomposes it, but should be taken rubbed with any viscid solution, as thin mucilage of gum arabic, on tragacanth. This tincture is sometimes very useful in a stoppage of the menstrual discharge, and is frequently of superior efficacy in outer female complaints, particularly *dysmenorrhoea,* or painful menstruation. In the author's book *On the Diseases of Females*, a case is related, under Painful Menstruation, of a lady who had been married nineteen years without issue, but who was cared of a female obstruction by the guaiacum, and a few months after was delivered of a fine girl. She took twenty four ounces of the tincture.

The guaiacum mixture *(mistura guaiaci* of the paharmacopaeia), not much used, but is of great service both in acute and chronic rheumatism. It merits notice when the other preparations of this substance fail to be serviceable. *See* RHEUMATISM.

GUM AMMONIAC

Ammoniac or ammoniacum is a stimulating expectorant, and is sometimes useful in obstructions in the bowels. It is prescribed with advantage in *asthma* and *chronic cough,* but is seldom used

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alone, being, for the most part, combined with emetic tartar, squill and ipecacuanha, when given for the relief and cure of these diseases. It forms a valuable ingredient in the compound squill pill of the shops. On account of its stimulating properties, its use must be avoided where any inflammatory action of the chest is going on. After the exhibition of smart purgatives, if given in combination with rhubarb, it is said to have proved valuable in mesenteric affections, by correcting the viscid secretions of the intestines. Dr. A. T. Thompson observes, that the same combination of ammoniac and rhubarb is singularly efficacious in that peculiar state of the bowels often accompanying hypochondriasis and indigestion, in which there is an almost constant degree of colic, particularly after taking food, and which appears to arise from a viscid mucus lodged in the intestines. The German physicians have great confidence in it in obstruction of the glandular viscera of the abdomen. In incipient scrophulous consumption, attended with a languid and irritable state of the system, this gum has been employed, in conjunction with tartarized antimony, with marked advantage.

It is particularly serviceable in those cases where the expectoration is deficient, from a want of power to throw up the viscid mucus accumulated in the bronchia, and where the skin is cold, and the pulse weak and sluggish.

The dose of ammoniacum is from ten to thirty grains made into pills with mucilage. In abdominal obstructions it is usually combined with small doses of rhubarb, and sometimes of tartar emetic also; in affections of the chest with squill, and perhaps ipecacuanha. The form of emulsion is an agreeable way of taking it—two drachms may be rubbed with the yoke of an egg, or half a drachm of gum arabic, and eight ounces of water gradually added—the close is one or two table-spoonfuls every two or three hours; with or without an equal quantity of almond mixture.

Externally, it is applied under the form of a plaster to reduce the size of indurated tumours, and white swellings of the joints. The plaster of ammoniac and mercury is often vary valuable for this purpose.

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GUM ARABIC

The tree which yields this article is found in almost every part of Africa. This gum is a simple demulcent, serving to lubricate abraded surfaces, and involve acrid matters in the stomach and bowels. It is chiefly used in the state of mucilage, but is sometimes taken in the solid form, to sheath the fauces, and allay the tickling irritation which occasions the cough in catarrh and pulmonary consumption; in which cases, a piece of it is allowed to dissolve slowly in the mouth.

The mucilage of gum arabic is made by dissolving four ounces of gum arabic in powder, in half a pint of boiling water. This, in the dose of half an ounce or an ounce, is a useful demul cent in looseness, dysentery, gravel, and scalding of urine, or as a vehicle for opium, and other medicines in these complaints.

Gum water, made by pouring a pint of boiling water on two or three ounces of gum arabic, is a very useful and agreeable diluent in many disorders, both acute and chronic. Thus in fever, in cough, consumption, stomach, and other chronic complaints, it cools the mouth, and sheaths the throat and alimentary canal, and likewise affords some support.

HARTSHORN SHAVINGS

These shavings are nourishing, and when dissolved in boiling water and united with orange juice and sugar, with or without a little wine, as circumstances may indicate, form a good article of diet for the sick and convalescent. Four ounces of the shavings, boiled in two pints of water, until one pint be dissipated, and the remainder strained, affords a clear transparent jelly.

HELLEBORE

Black hellebore root is a powerful cathartic, and was formerly much celebrated for the cure of *insanity*, *dropsy*, and *worms*; but its curative powers are much doubted by medical men of the present day, and, therefore, it is rarely employed. It is, however, sometimes

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of service in suppression of the menstrual discharge in full plethoric habits, when preparations of iron are inadmissible. In such cases Dr. Mead thought highly of it. The tincture is the best form of administering it, which may be given in doses of from thirty drops to a drachm, two or three times a day, in any agreeable vehicle.

HONEY

This well known substance is laxative, and, externally applied, detergent and stimulant. It is seldom ordered alone as an internal medicine, but applied to sores and cracks in the skin it proves a cleansing and grateful application, which promotes their healing. When mixed with a little water, it forms the best wash which can be obtained for the skin when chapped and excoriated by cold. It is an excellent adjunct to gargles in sore throat and ulcerations of the mouth.

Honey of borax is made by mixing a drachm of sub-borate of soda with an ounce of clarified honey, and is a cooling application of excellent use in thrush, excoriations, and ulcerations of the mouth.

HEMLOCK

Hemlock is a biennial, indigenous plant, growing under hedges, by road sides, and among rubbish, flowering in June and July. It is distinguished from other umbelliferous plants with which it may be confounded by *its large and spotted stem,* the dark and *shining colour of its lower leaves,* and their *disagreeable smell,* when fresh and bruised, resembling in some degree the urine of a cat.

It is a powerful narcotic and sedative, and is used as such, both internally and externally. Its present extensive use among professional men is a sufficient proof of its efficacy. When the plant is gathered at the right time, and properly prepared, it is of much service in extensive *ulcerations,* whether of a *scrophulous, cancerous,* or *syphilitic* character, and in *glandular tumours* : it allays their irritability, alleviates the pain, and corrects and improves the discharge. Dr. Fothergill thought highly of its virtues in some

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forms of *scrophula*, and many practitioners have found it of great value in cancerous diseases. It is also of much advantage in the latter stage of *hooping coughs* and *pulmonary consumption.* The extract of hemlock and henbane combined in equal proportions, and adapted, by means of mucilage and syrup, to the form of a mixture, affords an effectual palliative in coughs and pulmonary irritation, but the more agreeable and not less efficacious way, is to take this combination in pills.

Hemlock is of much service in many other cases where pain, uneasiness, or irritation are present; for example, in palsy complicated with rheumatism, in which the deficiency of motion is attended with acute pain,—in chronic rheumatism, in female complaints, and in periodical head-aches. In the latter case, it may be advantageously united with quinine in some instances, and with arsenic in others.[1]

The recent leaves are applied externally, and often with great advantage, to painful or ill-conditioned ulcers, or a poultice for the same purpose may be formed from the dried powder mixed with crumbs of bread.

The powder of the dried leaves, and the extract, are the forms in which it is given. The powder ought to have a fine lively green colour, without which it is useless; the dose is three grains, twice or thrice a day, gradually increased to five or eight grains. The extract *prepared in vacuo* is that only which can be depended upon; it may be given in doses of from three to twenty grains, twice or thrice a day. The extract of hemlock prepared by Mr. Allen, of Plough Court, and that at Apothecaries' Hall, is worthy of every dependance.

An over-dose of hemlock produces sickness, giddiness, great anxiety, stupor and convulsions. The best antidote is vinegar, after the stomach has been evacuated by an emetic of twenty grains of sulphate of zinc, and the excitement in the brain reduced by bleeding and purging.

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1. It is thought by some to be an aphrodisiac. Bergins, a foreign author of credit, says, "Impotentiam virilem sub usu conii curatam observavi".

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HENBANE

Henbane (in technical language *hyoscyamus*) is well known to be an indigenous plant, growing on waste grounds and at the sides of roads.

It possesses a very considerable narcotic and anodyne[1] power, and in large doses is poisonous. In medicine it is chiefly employed as a substitute for opium, to alleviate pain or procure sleep, in cases where the latter disagrees with the constitution, or it is desirable to avoid its constipating effects. It is also peculiarly indicated in complaints which call for the constant use of some anodyne for a considerable time, as, when properly managed, it produces its anodyne effects without distressing the general system. Like hemlock it favours the natural action of the bowels. It is thought to be peculiarly adapted for insanity occurring in child-bed; and is much employed in red gravel and stone, to allay pain and irritation.

It is generally considered by the profession to be a more effectual narcotic than hemlock, and, therefore, more commonly employed; but in my opinion it does not possess so much of an alterative quality as the latter, that is, it does not afford us so much assistance in our endeavours to alter the condition of diseased parts, and, consequently, is not so suitable and valuable a remedy, where we wish, at the same time, to alleviate pain, induce sleep, and remove disease. Hence we find hemlock to be the better medicine in cancerous and scrophulous swellings and ulcerations, and in many other indurations and ulcers attended with pain.

Henbane is administered either in the form of extract, or tincture. The dose of the extract is from four to twenty grains made into pills, with a little tragacanth or gum arabic powder and repeated twice or thrice in the twenty-four hours, if necessary. The dose of the tincture is from half a drachm to one or two drachms. Dr. A. T. Thompson says, *Elements of Materia Medica,* vol. i, p. 584, "In my own practice I have seen more good derived (in mania) from

1. Anodynes are medicines which relieve pain.

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eight or ten grains, combined with ten grains of camphor, and given at bed time, than from the repetition of smaller doses".

Alkalies and lime water are inadmissible in combination with henbane, since they destroy its narcotic power.

The means of counteracting the injurious effects of an excessive dose, are the same as are pointed out above; in the case of taking too large a quantity of hemlock.

HIERA PICRA

The words signify, Holy *Bitter,* from τεροζ, holy, and τιχροζ, bitter. It is a well known domestic remedy, chiefly used in female obstructions, and is prepared by mixing together a pound of hepatic alĪes, and three ounces of white canella bark. These are to be rubbed separately into powder before they are mixed together. It is usually taken in wine or spirits; and the dose is from ten to twenty grains; but it is also taken in pills, mixed together with a little oil of cloves and castile soap, a mode which I much prefer.

The canella bark is a valuable aromatic, and it both covers the taste, and modifies the operation of the alĪes, lessening its tendency to griping.

Hiera Picra is undoubtedly useful in some cases of female obstruction, and likewise in that form of bleeding from the womb which is liable to occur on the final cessation of the menses; and its success proves the importance of gentle purging in these complaints. A striking and successful case of this kind of haemorrhage may be seen in the author's *Treatise on Female Diseases,* under the head of *Final Cessation* : The lady was forty-two years of age, and almost all the known remedies for haemorrhage had been prescribed without effect—the *hiera picra* cured her speedily.

HOFFMAN'S ANODYNE LIQUOR

This is the compound spirit of sulphuric ether of the shops, and is stimulant, narcotic, and antispasmodic. It is used for the same

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purposes as the common sulphuric ether, and is sometimes useful in allaying irritability, and disposing to sleep, in the latter stages of typhus and other malignant fevers. It is less exciting than simple ether. When united to opium for the purpose of procuring sleep, it renders the operation of the opiate more pleasant, and counteracts its deleterious properties. The dose is from half a drachm to a drachm, in any simple fluid vehicle.

All ethers should be kept in closely-stopped phials.

JALAP

The jalap root comes from South America, and is said to take its name from Xalappa, a city of Mexico. It is a stimulant cathartic, acting briskly on the bowels, especially the larger bowels, and although occasionally griping severely, yet safe and efficacious. It is a good purgative in the torpid state of the intestines, in *low spirits, melancholy,* and other forms of *insanity;* in *worm cases,* and the slimy state of the bowels to which children are subject; and to carry off the water by stool in *dropsy*. In worms and insanity it should be combined with calomel, and in dropsy with cream of tartar, as compound powder of jalap, since these additions quicken its operation, and render it more effectual. A drop or two of some essential oil, as the oil of carraway or anniseed, should be added to each dose of jalap, to prevent griping. The watery extract purges moderately without griping, and is therefore well adapted for children; but the *compound powder of jalap* is by far the best preparation, of which the ordinary dose for an adult is a scruple, or half a drachm.

The dose of simple jalap powder is from ten grains to half a drachm, given in the form of powder, pills or bolus.

JAMES'S POWDER

This celebrated and valuable medicine is a *nostrum,* the original proprietor of which was Dr. James, a respectable physician in London, from whose prescription it is still prepared by Messrs. Newberry, of St. Paul's Church Yard. It operates as a diaphoretic

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and alterative, and is often of excellent use in *colds, coughs,* the commencement of, *fevers,* and all *inflammatory diseases,* as it changes, in a very gentle and frequently insensible manner; the diseased condition of action in the minute vessels of the circulating system, and thus conducts the existing malady to a favourable termination. If it be administered early, after the stomach and bowels have been previously evacuated by purgatives and an emetic, fevers of the most threatening aspect are often cut short by it. Its good effects may sometimes be increased by the addition of a small quantity of calomel, such as quarter of a grain to each dose. It is advantageously given in acute rheumatism, measles, small pox, colds, and recent coughs; and in obstinate eruptions of the skin it should be united with guaiacum as well as calomel. A gain and a half of James's powder, the eighth of a grain of calomel, and two grains of gum guaiacum in powder, made into a pill, and given every other night, forms one of the most efficient alteratives we possess, and is of the greatest service in almost all chronic diseases. In fever, inflammation, and other acute complaints, it must be given in larger doses, more frequently repeated, as three, four or five grains, with half a grain of calomel, every four or five hours; and its operation is assisted by the patient's drinking freely of some warm diluting fluid during the day.

As it is insoluble in water, the best manner of taking it is made into pills with conserve of hips. *Mewberry's James's Powder* is always to by preferred.

ICELAND MOSS

Iceland moss, called also Iceland Liverwort, is tonic and demulcent. It unites a strong bitter principle with demulcent properties, on which its medicinal effects are supposed to depend. Its virtues for the cure of *pulmonary consumption*, have been very highly extolled; but it does not appear of much service, except in that particular species called catarrhal consumption, whose more immediate seat is in the windpipe and its terminations. This species of *phthisis* frequently follows hopping cough, measles, and common cold, and is sometimes certainly much benefited by it. It allays the tickling

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cough, relieves the oppressed breathing, mitigates the hectic fever, invigorates the digestive organs, and seems in this way to have the power of exciting a salutary action in the internal membrane of the windpipe. This plant is a native of Iceland, where it still possesses a high reputation as a remedy for cough and *consumption.*—*Mackenzie's Travels,* 4 to. *Appendix,* p. 411.

It is generally given in the form of decoction, which is prepared by boiling one ounce of the picked moss in a quart of water down to a pint, and then straining it while hot. The dose is from half an ounce to two ounces, three times a day, either alone or mixed with milk. In this state the decoction is very bitter, but although not the most pleasant, it is probably the most efficacious way in which it can be taken. If, however, the patient will not take it in this way, it may be freed from a considerable portion of its, bitterness by being steeped in hot water for two or three hours, previous to its being used to make the decoction. This water is, of course, thrown away, and then the ounce of moss is boiled in two pints of water, as above directed.

IODINE

This is a peculiar substance procured from sponge, and other species of *fucus*. It is a very active medicine, and in all its forms is sometimes used with advantage in relieving the acute pain attendant upon hard and *malignant swellings*, whether of a scrophulous or cancerous nature, and in reducing their size, or preventing their increase. It will often speedily mitigate the most agonizing pain in these complaints, and is applicable to solid tumours of almost every description. It has been highly praised for its virtues in scrophula,—too highly certainly,—for here its use is limited, and its efficacy in curing the disease seldom considerable. For iodine being a remedy of great activity, it cannot under any circumstances be used unremittingly for more than a very short time, and even when employed with regular intervals, its continued use is apt to induce much emaciation and debility, and thus to aggravate the scrophulous symptoms, rather than relieve them; since they originate in debility, and are never permanently benefited by any means which lessen

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the tone of the general system. Notwithstanding, I think it worthy of much notice as an auxiliary, in the management of scrophula,[1] In indolent enlargement of the testes in men, accompanied with severe pain, it is a valuable medicine, giving more speedy and effectual relief than any other substance; and it is reported to have been of great service in reducing enlargement of the liver, even when dropsy has supervened.

It has proved of uncommon service in some female complaints, which I have fully noticed in my publication on those diseases, especially in tumours of the breast and womb, and in diseases of the *ovaria*.

Much caution is required in its administration. In delicate nervous habits, it is liable to bring on palpitations, dry cough, tremors, and other disagreeable symptoms. Many medical men employ it in complaints to which it is not at all applicable, and to an extent which sets all sound medical principles, and common sense, too, at defiance; and I warn my readers to be sparing in its employment.

Internally it may be given in the form of tincture of iodine, or solution of iodide of potassium. The dose of each is at first ten drops for adults, thrice a day, in a wine-glassful of barley water, or common water, gradually increased to half a drachm, if the patient can bear it. It should not be taken constantly, the safest and most effectual mode of administering this medicine being for the patient to take it for thirty days, then to lay it aside for a few days, and afterwards to resume and discontinue it alternately, at similar intervals. The *solution of iodide of potassium* is generally and deservedly preferred, on account of its mildness. It is made by dissolving half a drachm of the salt in one ounce of water. The *iodide of potassium* itself may be taken in the dose of three grains, twice or thrice a day, in a wine-glassful of water, barley water, or decoction of bark.

Iodide of iron is a tonic form of taking iodine, and may be

1. It is worthy of remembrance that the Genevese and Swiss physicians, who were the first to bring this substance into notice, anal to extol it, were also the first to abandon their original confidence in it.

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used with confidence when debility is present, in the dose of two, three, or four grains, made into a pill, thrice a day.

For external use, a drachm of the iodide of potassium is mixed with an ounce of recent hog's lard, and about the size of a nut rubbed into the scrophulous and cancerous tumour, night and morning, for ten or twenty days; and then laid aside and resumed in the same manner as I have directed above for the use of the tincture. When this remedy is employed for alleviating the pain and reducing the size of hard and painful swellings, it is often not necessary for a patient to take it internally, the external use, in the form of ointment, having as much effect as its internal exhibition, with the advantage of greater safety, and direct application to the diseased parts.

IPECACUANHA ROOT

This plant comes from Bahia, Rio Janeiro and other provinces of the Brazils. There are three varieties of the root, the brown, the grey, and the white, of which the first is by far the best.

Ipecacuanha, when administered in large doses of ten or fifteen grains, is emetic; in smaller ones of two or three grains, diaphoretic and expectorant; and in still smaller doses it acts as a stomachic, stimulating and giving energy to the digestive organs. As an emetic, it is mild, safe and certain in its operation; it evacuates completely the contents of the stomach, and does not so much weaken it as antimonial emetics. It is the emetic best adapted for children, It is an established fact, that an emetic given at the commencement of continued fevers, will sometimes cut short their progress, or if it fail in accomplishing this object, will give to the subsequent symptoms a milder aspect, and with this view, fifteen or twenty grains of ipecacuanha powder may be used with great advantage. In doses of two or three grains repeated every three or four hours, till it operates by vomiting, sweating, or purging, it is found of eminent utility in dysentery and chronic looseness; indeed its effects in these severe complaints are often invaluable, and it is, perhaps, the most beneficial aperient in dysentery; for when we can bring it to act in this way, it produces a steady determination of the

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peristaltic motion of the bowels downwards, at the same time that it strengthens their internal surface, and relaxes the skin. Helvetius first made known its use in *dysentery,* and was rewarded by Louis XIV, with 1000 *l* sterling for the discovery. In the same doses it is of excellent use in *spitting of blood, hooping cough, difficulty of breathing* and *spasmodic asthma.* In spitting of blood it is particularly worthy of confidence, both to stop its progress and prevent its return.

In still smaller quantities of a grain, or half a grain, three or four times a day, it strengthens the digestive organs, and is very beneficially employed as a remedy for indigestion, bilious and liver complaints. In such cases it may either be used alone, made into pills with a little hard soap, or be combined with steel or any bitter extract.

When combined with opium, it forms the compound ipecacuanha powder, and proves a valuable anodyne, sudorific, and alterative, of great service in acute and chronic rheumatism, and, in other complaints in which we wish to relieve pain, procure sleep, and at the same time relax the skin.

IRON

Preparations of iron or steel, as they are sometimes called, are of all metals the most salutary to the animal system, from being the only metal having any sensible activity which hay no poisonous quality. When given medicinally, the effects obtained from it are those of a tonic; it increases the vigour of the circulation, causes, the blood to assume a more florid hue, promotes digestion, excites the secretions, or restrains them when they have been morbidly increased from debility and by its astringency, checks profuse evacuations, and counteracts the tendency to haemorrhage. The diseases in which it is used are those which are dependant on; or attended with, a weak, languid habit of body, as *green-sickness, indigestion* and its consequences, *hysterics, whites, palsy, scrophula, rickets,* and *consumption.* It is also extremely beneficial in *cancerous ulceration,* and other ill-conditioned sores. The use of iron is improper where there is a considerable tendency to

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inflammatory action, or any particular fulness of the vessels. In these states of the system it occasions heat, thirst, head-ache, laborious breathing, and many other unpleasant symptoms, when its administration ought to be suspended. But when given in a proper state of the body, few medicines are capable of producing more beneficial effects, as I have repeatedly proved in my practice.

Numerous preparations of this metal are medicinally employed, the chief of which are the sesqui-carbonate of iron, citrate of iron, the sulphate, and tartarized iron, and the *tincture of muriate of iron.*

The *sequi-carbonate of iron* and the *citrate of iron* are two of the most valuable of its preparations, and are in common use. They are tonic, and useful in indigestion, head-ache, scrophula, green-sickness, worms, and in all cases in which preparations of iron are indicated. Mr. Carmichael, of Dublin, used the sesqui-carbonate of iron as a remedy in cancerous ulceration, both internally, administered in large doses, and eternally applied, sprinkled on the sore. Cases have been reported in which this practice has proved successful; and no doubt it relieves pain, promotes a healthy discharge, and strengthens the general habit. The dose is from five to twenty grains, repeated twice or thrice a day, made into pills, with a little mucilage of gum arabic, or extract of liquorice. A small quantity of aromatic powder causes it to sit easier on the stomach.

The *sulphate of iron is* one of the most active preparations of the metal, and may be advantageously employed in all the complaints above enumerated. The dose is from one to five grains, combined with extract of gentian, and a little aloes.

Tartarized iron possesses the same medicinal powers as the other preparations of iron; but from its mildness, slight taste, and ready solubility, it is a more convenient form for the administration of iron to children, and in those cases in which the other saline, preparations of it prove nauseating, and sit uneasy on the stomach. It has been extolled as a remedy in dropsy, in which it is supposed to exert both a diuretic and a tonic power. The dose is from ten grains to half a drachm, given in the form of powder or bolus,

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combined with four or five brains of aromatic powder. It may be repeated twice or thrice a day.

Tincture of muriate of iron (now called *tincture* of *sesquichloride of iron)* is a tonic of great power. It is also diuretic. It has been found of signal service in *erysipelas* and *diphtheria,* and likewise in *scrophula*, and all cases where a blood tonic is required. The *dose is* from fifteen minims or drops to thirty or forty, in a glass of water, twice a clay.

Wine of iron is a very useful tonic, especially adapted for children. The dose is about a tea-spoonful, or two, in water.

JUNIPER BERRIES

The common juniper is indigenous, growing on heaths and chalky hills, and flowering in May. But the great majority of juniper berries which are used in Britain, are brought from Germany, Holland and Italy.

They are diuretic and cordial. They have been long known as a remedy in *dropsy*, but cannot be depended on alone, although they form an excellent adjunct to foxglove and squill. The tops are also used, and as the virtues of the berries depend on the essential oil, which is found in the woody part also of the plant, they must be equally efficacious. They have been recommended in scorbutic and cutaneous affections. The best form of using the berries is that of infusion, made by pouring a pint of boiling water on three ounces of the berries bruised, of which the dose is a tea-cupful every four hours. The proper dose of the oil of juniper is from three to twelve drops, combined with water by means of sugar or mucilage.

KINO

Kino is a powerful astringent. Like catechu, it is employed in obstinate *chronic looseness, whites,* and *internal haemorrhages;* but it is thought to be less certain in its effects than catechu, and is, therefore, less used. Dr. Watson, however, seems to think highly of it, and to be much in the habit of employing it. The alkalies,

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solutions of isinglass, and strong acids are incompatible in prescriptions with kino.

The dose in substance is from ten grains to half a drachm, and of the tincture from one to two drachms.

KOUSSO

The Kousso is the flowers and unripe seeds of the *Hagenia Abyssinica* of Bruce, and subsequent travellers, and which has been lately very strongly recommended as an efficacious remedy for tape worm. It is called *Brayera Anthelmintica,* and is obtained from *Abyssinia.* Some writers assert it to be pre-eminent in its operations as a vermifuge.

The dose of kousso for an adult is half an ounce, reduced to a fine powder, and infused for a quarter of an hour in a pint of boiling water; the whole to be well stirred together and drank, early in the morning on an empty stomach. The mixture is almost tasteless, and consequently does not require any addition for the purpose of making it palatable; but the Abyssinian method of mixing honey with it, is a good practice. The French physicians give a dose of castor oil twenty-four hours before exhibiting the kousso, but this is not necessary. It is advisable that the bowels should be in an empty state when it is taken, but not relaxed; therefore, a small quantity only of simple food should be taken, both before and after the dose for twenty-four hours.

The immediate result of the medicine is generally two or more evacuations of the bowels during the day; these should be carefully examined, to ascertain if the whole of the worm is expelled, and the head of the animal should be particularly sought for, if possible, by the aid of a microscope. Should it not be found, or should the bowels not act sufficiently within twenty-four hours, a dose of castor oil must be given, and the same attention be directed to the evacuations. It is said to be very seldom that a second dose of the kousso is required, and some little time should be allowed for the action of the first dose, before it is resorted to; it may, when necessary, be repeated with perfect safety.

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The effect of kousso upon the worm appears to be very severe and distinctive. When discharged it is generally found completely saturated, as it were, with the powdered kousso; its joints are filled with it, its various mouths choked up by 'it; and it is even found to have penetrated the alimentary canal. Such being its effects, I recommend the kousso to be taken in a tolerably fine powder.

KREOSOTE

Kreosote or Creosote signifies meat-preserver, and is a compound term derived from the Greek κρεαζ, flesh, and σωζει to preserve. This name was given by Dr. Reichenbach, of Blencko, in Moravia, to a peculiar proximate principle, discovered by him in 1832; and found to exist in the tar resulting from the destructive distillation of wood.

In its pure state it is a colourless, transparent, oily liquid, having the fluidity of thin almond oil. One of its most remarkable properties, is the decisive power with which it is endowed of effecting tile rapid coagulation of all the albuminous and serous fluid's existing in the living, as well as the dead animal tissues. When brought in contact with white of egg, coagulation instantly ensues. Kreosote, in its concentrated state, and in consequence probably of its coagulating power, exerts all the decisive and rapid effects of a strong poison on man and animals; small animals, as wasps; beetles, etc. when moistened with it, dying under long and violent convulsions, and fish ceasing to exist in water impregnated with one-hundredth part of it.

Where two or three drops of *very dilute* kreosote are taken into the stomach, a sensation of warmth is experienced. The greatest circumspection is required in the administration of this medicine. Internally administered, it is chiefly useful in a few peculiar cases of indigestion, where a good deal of torpor exists; externally it is used with uncommon advantage in ringworm of the scalp, in itch, and in tooth-ache. In tooth-ache from decayed teeth, it is only necessary to moisten the point of a wooden spill with the kreosote, and introduce it into the hollow of the tooth.

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LACTUCARIUM OR JUICE OF LETTUCE

The soporific properties of the garden lettuce were known in the earliest ages. Galen used to eat the lettuce in the evening as a remedy for wakefulness at night; and most persons find it induces sleep.

Lactucarium is the inspissated juice of the garden lettuce, and has the colour, and in some measure, the taste and odour of opium; but no morphia has yet been obtained from it, and its narcotic principle is, therefore, still undiscovered. Its analysis is said to prove it to contain a large proportion of caoutchouc, (or India rubber), as much as twenty-two parts in fifty.

Its medicinal effects are very nearly the same as those of opium, but it is undoubtedly much milder in its operation, and may consequently be used in *cough* and *consumption,* and in other cases, where opium, from its stimulating effects, cannot be borne. Lactucarium may be advantageously taken by persons who cannot take opium in any shape. Dr. Duncan, Sen of Edinburgh, first suggested its use in his *Observations on Pulmonary Consumption, Appendix,* p. 162. The dose is from one to six grains or more, in the form of a pill.

LAUDANUM

What is generally termed laudanum is the tincture of opium of the shops, which is made by pouring two pints of proof spirit of wine on two ounces and a half of powdered opium. These articles are allowed to digest for a week or two, and then strained, when they are fit for use. Nineteen minims, or about thirty-five drops, of laudanum contain one grain of solid opium.

This tincture is used in all cases in which opium is indicated, and is a very convenient and elegant form of giving the remedy. In general it operates more speedily than the solid opium. The usual dose is from twenty drops to a drachm; but in case of violent and continued pain, and in some particular diseases, very large doses can be borne, and are even necessary. It is not, however, so eligible a remedy for general purposes as the "Black Drop", or "Battley's Solution", since both these preparations are more powerfully

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anodyne than laudanum, and do not affect the head or confine the bowels so much.

It is worthy of notice, that the vehicle in which laudanum is exhibited is often of much consequence, from its effect on the stomach; thus if given in lemon juice or vinegar, or in some a greeable aromatic water, or in a cordial draught, (*see* No. 79), or, in other cases, in a little brandy and water, it may be rendered both less irritating to the system, and more useful to the patient, than when merely taken in water.

As an external application, this tincture rubbed on the skin produces its usual anodyne effects in a smaller degree, allaying pain, and relaxing spasm.—Under the head of OPIUM I have considered the various uses of laudanum, and its modification by combination, age, sex, etc.

LAVENDER DROPS

These are the compound spirit of lavender of the shops, and are composed of the simple spirit of lavender, spirit of rosemary, cinnamon bark bruised, nutmegs bruised, and red saunders-wood. They are an elegant and grateful cordial and stimulant, useful in *languors* and *faintings*. But it should be recollected, that they are merely a palliative, and their use should not be allowed to supersede that of tonics, and other medicines capable of acting beneficially and permanently on the cause of these symptoms. It is a useful adjunct to stomachic infusions, as infusion of gentian, cascarilla, etc.

The dose is from thirty drops to two tea-spoonfuls, in any agreeable vehicle.

LEECHES

As these little animals are very serviceable, and frequently used in domestic practice, it is necessary that I should say a little about applying and cleaning them, etc. They are at times applied in all cases where local blood-letting is necessary, and particularly to

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places where cupping-glasses cannot be applied. In acute inflammation of vital organs, their use should never be neglected; for however important general bleeding is in these instances, the drawing of blood from the immediate vicinity of the inflamed part, by means of leeches, is of great consequence.

It is sometimes extremely difficult to make them bite, which they never will do when they are sick. The best mode of applying them seems to be, to take them out of the water for some minutes before they are to be used, and to dry them well with a very soft cloth directly before they are applied. The part should also be well cleaned with soap and water, then washed with a little pure water, and made very dry. If there be any hairs on the spot, these must be close shaved. When they, nevertheless, will not readily fix, or where it is wished to apply them very exactly on one particular spot, putting them into a large quill cut at both ends, and applying the end at which the head of the animal lies to the part, with the finger on the other end, is an excellent mode of making them bite. The quill is withdrawn after they are firmly fixed. Another excellent mode of making them fix directly on any particular spot, is said to be by touching the part with the bloody spongy point of a quill recently taken from a pigeon's wing. Putting them into some porter for a few minutes before applying them, is likewise a good way to make them bite. They drop off spontaneously, whenever they have gorged themselves with blood; and they may be separated at any time by placing a minute quantity of salt on the head. Few leeches can draw more than half a fluid ounce of blood; and therefore it is necessary, in order to increase the quantity, to keep the orifices bleeding by bathing them with hot water. After the leeches drop off, the application of a very minute quantity of salt makes them disgorge all the blood they have sucked; and if they be imediately thrown into clean water, and this repeatedly changed for three or four times, they soon recover their health and vigour. Dr. Johnson, who has written a treatise on the economy of the medicinal leech, advises the use of vinegar instead of salt, which is not apt to blister the lips of the leech, as salt does, preventing it from sucking for some considerable time.

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Broth made with the fattest part of tripe is an admirable wash for leech bites, soothing and healing them very rapidly.

LENITIVE ELECTUARY

Lenitive electuary is made in the following manner. Take of best senna leaves, in very fine powder, four ounces; pulp of prunes, a pound; pulp of cassia, a quarter of a pound; pulp of tamarinds, three ounces; treacle or simple syrup, a pint and a half; essential oil of carraway, two drachms. Boil the pulps with the syrup or treacle, to the thickness of honey; then add the senna, and, when the mixture is nearly cold, the oil of carraway; finally, mix the whole thoroughly together.

When properly prepared this electuary is a mild and pleasant aperient, and may be used as such in all cases of costiveness. It is well adapted to regulate the bowels of children, pregnant women, and all delicate persons; and may be used either alone, or combined with a small portion of sulphur and cream of tartar. When united with an equal quantity of flowers of sulphur and cream of tartar, it forms one of the best remedies for piles now known. Employed alone, the dose is from one to three tea-spoonfuls taken at bedtime.

But it is very rarely properly prepared, the wholesale druggists too frequently employing apples, jalap and other cheap ingredients, instead of the articles ordered by the pharmacopoeia. The electuary from Apothecaries' Hall is excellent.

LETTUCE JUICE

See **Lactucarium**

LIME WATER

Lime water is made by pouring six pints of boiling water upon a quarter of a pound of fresh burnt lime. They are to be agitated together, and the vessel covered directly and set apart for three hours; afterwards the solution is to be preserved upon the

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undissolved lime, in well stopped glass bottles, and the clear fluid poured off when it is wanted for use.

It is tonic, antacid, destroys worms, and is externally detergent. It proves very useful in *indigestion,* attended with much acidity on the stomach, in *chronic looseness, diabetes* and *whites*. It destroys intestinal worms, and is serviceable in slimy bowels. Mixed with an equal quantity of milk, it furnishes an excellent remedy in the bowel complaints of children, and is very useful in consumption and fever. Sometimes it is used with advantage in *red* gravel, and in stone.

Dr. Hutchinson of Dublin, has strongly recommended an infusion of Peruvian bark in lime water as a very valuable tonic in *scrophula, rickets* and *extreme general debility.* He asserts, that it has cured several desperate cases of debility which had been pronounced hopeless; and it appears to me to be a remedy, worthy of great confidence. A pint of lime water may be allowed to digest for six hours, upon an ounce of Peruvian bark, coarsely powdered, then strained off, and taken in doses of a wine-glassful or more, three times a day.

Milk disguises the flavour of lime-water without impairing its virtues. The dose is from half an ounce to half a pint, once or twice a day.

LIQUOR POTASSAE

This is a medicine much employed by professional men as an antacid, and to remove or lessen certain tumours and other swellings. In urinary calculi, in leprosy, and those disorders of the skin which are symptomatic of derangement in the digestive functions, its remedial powers are well ascertained.

In the reduction of glandular and other tumours its efficacy is often great, and I have known it of uncommon service in certain anomalous swellings. It perfectly relieved a lady who had suffered for twelve years from an enlargement of the brain, attended with a fixed pain on the top of the head, total inability to take exercise, and who, at uncertain intervals of a few months, was repeatedly

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attacked, through the whole period of the twelve years, with acute inflammation of the brain, in which her life was again and again despaired of. This lady had tried iodine, sarsaparilla, digitalis, calomel, and other means almost without number, and certainly without much benefit, and was at length cured by taking a tea-spoonful of the *liquor potassoe,* twice a day, in barley water.—*See* my *Treatise on Indigestion.*

The dose is from a quarter of a tea-spoonful to a tea-spoonful, twice or thrice a day, in half a tea-cupful of barley water. Its long continued use weakens the stomach.

LOBELIA INFLATA

The *lobelia inflata,* or Indian tobacco, is a medicine which has been lately introduced into medical practice, especially for the relief and cure of spasmodic asthma, and spasmodic cough. It is a biennial plant, growing almost throughout the United States, and is much employed, I believe, in America. It is an emetic, and also possesses expectorant and sedative properties. It is with this plant as with the ordinary tobacco, some people can bear it well, while in other cases the smallest dose produces giddiness and vomiting. It should, therefore, be always commenced in small doses, as twenty or thirty drops of the tincture, and gradually increased if it agrees.

It is praised for its efficacy in spasmodic asthma in *Bigelow's American Medical Botany,* a respectable work; and a case is therein related of a physician (Dr. Cutler), who suffered from asthma for ten years, and during the paroxysm, resorted to many medicines for relief, without experiencing much benefit from any, until he took the tincture of *lobelia inflata,* which immediately relieved him, and subsequently improved his general health. It is undoubtedly sometimes of uncommon efficacy in this complaint, and if persons have tried other means without effect, I advise this medicine not to be disregarded; but I question whether it be in general superior, or even equal, to many other remedies for asthma, and would therefore guard my readers against being imposed upon by the strong (which are indeed too often interested and airy), representations of some persons of the present day.

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The tincture is the form in which it is used, which is made by digesting, for a few hours, two ounces of the dried plant in a pint of diluted spirit of wine; of which a tea-spoonful is the ordinary dose, taken in water, and repeated thrice a day.

LOGWOOD

Logwood is a valuable astringent in chronic dysentery and diarrhoea. It checks the frequent action of the bowels in these complaints without producing constipation and feverishness, and is therefore well adapted to check the diarrhoea of consumption.

The *dose* of the extract is from ten to twenty grains made into pills, and of the decoction from two to four tablespoonfuls, repeated after every loose motion. The decoction is the beat form of using it, but the pill is the most agreeable.

MAGNESIA

Magnesia is antacid, and when acidity in the stomach prevails, purgative; but if no acid be present, it does not appear to increase the peristaltic motion of the bowels. It is a useful remedy in *acidity of the stomach* and bowels, particularly of children, and proves to them a suitable and efficient purgative, when combined with a little rhubarb powder. It is preferable to chalk and other absorbents in heart-burn, when the bowels are costive. In *red* gravel it is very useful; and when the concretions are formed in the kidney, no remedy is so efficacious. When gout and gravel are combined, and magnesia can be brought to act gently on the bowels, the symptoms of the former disease, as well as those of the latter, are often much relieved by it. There are two preparations of this article—the calcined magnesia and the carbonate. When much flatus exists in the stomach, the former is preferable. The dose of the calcined magnesia is from ten grains to half a drachm, taken in water or milk; of the carbonate of magnesia, from half a drachm to a drachm or more.

Henry's Magnesia appears to differ from the best calcined magnesia of the shops, only in being prepared so as to form a more

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impalpable powder, which causes it to act more pleasantly and effectually.

MANNA

Manna is the produce of the flowering ash, a tree which is a native of the South of Europe, growing abundantly in Calabria, Apulia, Sicily, and on the loftier mountains of Greece.

It is a very gentle laxative, fit only for children, and persons of very weak habits. Indeed, even to such patients it is not in general a useful medicine alone, and is advantageously combined with senna tea, or rhubarb. The dose for children is from one to four drachms.

MARSH-MALLOWS

Both the marsh and common mallow are useful demulcents in cough, gravel and stone, in which cases they are given in the form of decoction, a pint or two being drank in the course of the twenty-four hours. The roots and leaves, well boiled together, are sometimes used as an emollient poultice to promote suppuration, in other words, to bring any inflammatory swelling to what is vulgarly called a head, when that course is considered desirable.

Warm fomentations of the leaves and roots of the mallow, boiled in water, are of great service in many severe *contusions* and wounds, both in man and animals, in which cases they have considerable effect in reducing the inflammation and swelling, and promoting a favourable termination of the injury. An animal most severely gored in the belly, soon recovered by fomenting the part very frequently with the above decoction.

MAY APPLE OR MANDRAKE

This is one of the new American remedies lately introduced into this country, and which are highly extolled by some persons; but we as yet know little of their virtues. Time and experience are

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needful to enable us to speak of them with well-grounded confidence. *Podophyllin* is the active principle of the may apple, and is extolled as an efficient purgative and alterative, operating chiefly on the liver; and very useful in torpid states of that organ. The dose is one or two grains in a pill. But I do not believe that *podophyllin* will be found so efficacious in torpid liver and goat as dandelion, mild mercurials, and our ordinary purgatives and alteratives, such as No. 97 or 98A, or No. 104 or No. 74D.

The mercantile spirit of the age is now deluging this country with new American medicines, but they are untried, and the value of most of them as yet unknown. What we require is not a multiplication of new medicines, but a more exact knowledge of the virtues and mode of administration of the old.

MEZEREON BARK

This is a stimulating diaphoretic and alterative, of considerable efficacy in *chronic rheumatism, cutaneous eruptions,* and some cases of *scroplaula.* It is likewise a useful remedy for the secondary symptoms of syphilis, and forms an active ingredient in the celebrated decoction of sarsaparilla. Dr. Withering employed it successfully as a local stimulant in a case of difficulty of swallowing, occasioned by Palsy. *See* Palsy.

An ointment of the expressed juice of the bark is valuable for dressing issues—it is said to have advantages over the savine or any other ointment for this purpose.

It is generally given in the form of decoction, made by boiling two drachms of the bark of mezereon root, with half an ounce of liquorice root, in three pints of water, down to two pints; of which the dose is from four to six ounces, three times a day.

MORPHIA

See **Opium**

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MUSK

Musk is obtained from an animal resembling the deer, inhabiting the Alpine Mountains of the East of Asia, particularly of the Himala Mountains, which divide Thibet from India. It is a solitary animal, living among the rocks, and frequenting the highest tops of the snowy peak; very timid, and difficult to be taken.

This article is stimulant, and antispasmodic, possessing much power in resolving spasm, and increasing the energy of the brain and nerves. Hence it is sometimes efficaciously given in *typhus fever*, when *low delirium,* twitching of the tendons, and hiccough supervene. It has also been praised for its virtues in arresting the progress of *gangrene,* when combined with ammonia. Dr. Cullen considered it one of the most powerful antispasmodics we are acquainted with, and many other eminent practitioners are of the same opinion. I think it much inferior to assafoetida. It is sometimes advantageously exhibited in spasmodic diseases, especially in *epilepsy, hysterics,* and *cholera morbus*. In large doses it is of great service when gout suddenly leaves the extremities, and fixes on the stomach, or some other vital organ. It is a very high priced article, and is with great difficulty obtained genuine.

It is given in substance, in the form of a bolus, of which the dose may be from eight grains to a drachm, repeated at intervals of three and six hours.

MUSTARD SEED

Mustard seeds are slightly stimulant, diuretic, and aperient, and have been found useful in costiveness, indigestion, dropsy, and the torpid state of the bowels which accompanies palsy. They have become of late a very popular remedy for *indigestion, costiveness,* and some other complaints, and much has been deservedly said of their good effects. I was formerly inclined to look upon them as frequently objectionable, on account of their supposed stimulant properties, and that when they did agree their efficacy was not so great as was represented; but a closer attention to the subject has convinced me that they form a remedy of no mean power, more

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especially in costiveness, indigestion, and some anomalous affections of the general health. They act very mildly and yet effectually as an aperient, but have little stimulating power, and afford a voluminous stool of a proper consistence. It is very evident that they exert a considerable alterative effect on the constitution when persevered in, which seems to be owing to their containing sulphur, (a minute portion of that valuable alterative substance having been detected in their envelope), and also to their regular laxative operation. For whatever substance acts regularly and mildly as an aperient, is at the same time alternative and invigorating, an effect which results no doubt from the marked influence which a regularly healthy action of the bowels has on the whole system. In the above disorders, these seeds may be taken (swallowed whole) in doses of two or three tea-spoonfuls, or a table-spoonful, twice or thrice a day.

The powder of mustard seed, mixed with water, in doses of three or four tea-spoonfuls, is emetic, and, as such, is used in paralytic cases, and will often operate quickly and fully when other emetics fail. Mustard poultices, made by mixing the flower with water, are powerfully stimulant when applied to the skin, and put on the soles of the feet, are often of much service in the delirium of typhus, and in comatose affections.

MINDERERUS'S SPIRIT

This is the solution of acetate of ammonia of the shops, and is made by mixing together two ounces of sub-carbonate, or, as it is now called, sesqui-carbonate of ammonia, and four pints of diluted acetic acid. It is a very useful cooling diaphoretic, and is in common use in all *fevers,* for the purpose of relieving heat, relaxing the skin, said promoting a gentle perspiration. Its operation in this way is much assisted by the patient drinking freely of some warm slop, and by his keeping the body moderately warm. It is of signal service in painful menstruation, probably from its solvent powers on the blood. It forms a principal ingredient in the common saline draughts, and is generally given in combination with camphor mixture, antimonial wine, and purified nitre. The ordinary dose is from half

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an ounce to an ounce, given every three or four hours, in water or camphor mixture.

Diluted with water, it is externally applied as a lotion to inflamed surfaces.

MURIATIC ACID

This acid is now called hydrochloric, and is tonic and antiseptic, and is efficaciously used in *typhus* and *typhoid fevers, malignant sore throat,* and *cutaneous eruptions.* The good effects of this acid in malignant typhus fever are sometimes remarkable; and Dr. Reich, Professor of Medicine in the University of Erling' in Franconia, was rewarded with a considerable pension from the King of Prussia, for the success with which he employed it in such cases. I have proved its value in my own practice. Sir William Fordyce also strongly recommends it in the same class of diseases; and Dr. Paris, of London, says, that he has uniformly exhibited it, with success, in the most malignant cases of typhus and scarlet fever, during several years extensive practice in the Westminster Hospital. It is likewise useful in some cases of *indigestion* accompanied with general debility, in the secondary symptoms of syphilis, and in *white* gravel. The dose is from ten to twenty drops, in a tea-cupful of barley water, or infusion of barb. In desperate cases of typhus, half a drachm, may be given at a dose, every four hours, properly diluted.

In typhus and typhoid fevers, Dr. Chambers says (*Clinical Lect.* p. 59) "It is so large a constituent of the body, that it might almost be called a food instead of a medicine, and it is a powerful arrester of the decomosition of animal matter". He has employed it with gratifying results, having adopted it from the description given him by another practitioner, of the advantageous use of it by Dr. Mackenzie.

In the proportion of a drachm or two in six or eight ounces of infusion of roses, or decoction of bark, it forms a very useful gargle in ulcerated sore throat.

It should never be measured in a leaden or pewter spoon—one

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of wood is best. Diluted muriatic acid is made by mixing one part of the acid with four of water, say, one drachm of the acid with four drachms of water.

Its antiseptic properties have been long known. Sir William Fordyce relates, that a drysalter acquired a large fortune from possessing a secret that enabled him to send out provisions to India in a better state of preservation than any other of the trade; his secret consisted in adding a small quantity of muriatic acid to the contents of each cask.

By pouring a little sulphuric acid on common salt, muriatic acid gas is disengaged, which has the important property of destroying the infection in sick rooms and hospitals, where putrid fever exists.

When this acid is taken as a poison, the best antidotes are soap and calcined magnesia, suspended in water, the patient taking care to drink copiously of warm water, milk or broth.

MYRRH

Myrrh is the produce of Arabia and Abyssinia.[1] It is a stimulant and slight tonic, promoting expectoration, and is, therefore, serviceable in some cases of *indigestion,* accompanied with *cough,* in *green-sickness, old coughs, habitual asthma,* and the latter stages of *pulmonary consumption.* In indigestion, old cough, and habitual asthma, it should be united with a small quantity of sulphate of zinc, in the proportion of six or eight grains of powdered myrrh to half or three-fourths of a grain of sulphate of zinc, made into one or two pills with conserve of roses, and repeated twice a day. Thus combined, it has been found extremely useful in the peculiar cough

1. Myrrh is frequently mentioned in the writings of Moses. We find it noticed in the very touching narrative of the selling of Joseph, by his brethren, to the Ishmaelites, in *Genesis, chap.* xxxvii. *v. 25. "And they sat down to eat bread: and they lifted up their eyes, and looked, and behold, a company* of *Ishmaelites came from Gilead with their camels bearing spicery and balm and Myrrh, going to carry it down, to Egypt".* Notwithstanding its being noticed so early, it is remarkable that to this day the plant from which it is procured, and how it is procured, whether by spontaneous exudation, or artificially, is wholly unknown.

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which sometimes accompanies pregnancy, and continues after abortion. In the commencement of pulmonary consumption, it proves too great a stimulant, and is generally injurious; but in the advanced periods it may frequently be given with advantage, when it should be united with sulphate of iron, or zinc. It seems most beneficial in pulmonary ulceration following acute inflammation of the lungs, and other advanced cases of the florid species of consumption. The ordinary dose is eight or ten grains twice or thrice a day, but it may be increased to half a drachm. If there is much hectic fever present, it may be advisable to unite it with a little nitre, or cream of tartar.

The tincture of myrrh diffused in water is an efficacious lotion to the gums when in a spongy and diseased state, and it forms a valuable stimulant application to old fetid ulcers. It is likewise a very useful gargle in putrid sore throat.

MOXA

The term Moxa is given to a cone, or cylinder, composed of a certain quantity of cotton wool, over which a piece of fine linen is rolled, and fastened at the side by a few stitches, the base of which is placed on or near the diseased part to be operated on, the top being set fire to and allowed to burn until the whole is consumed. This conical cylinder should be about an inch long, and of a proportionate thickness. The moxa has been used in the eastern parts of the world many centuries, and among the Chinese it consists of the tomentum of the leaves of the *artemesia latifolia.*

A porte-moxa is intended to fix the cylinder upon the precise spot where the application is to be made. The metallic ring of this instrument is kept from touching the skin by means of three small supports of ebony, which is a bad conductor of heat. After the extremity of the cone has been set fire to, the combustion is kept up by means of a blow pipe, still allowing it to proceed slowly. The precise spot to which the moxa is to be applied ought to be first marked with a little ink, and all the surrounding surface covered with a wet rag, that has a hole in the middle, so as to leave the part bare which has been marked. After the whole has been consumed,

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in order to prevent the subsequent inflammation and suppuration from being too considerable, the water of ammonia should be immediately applied to the burnt part.

The diseases in which the moxa has been most efficacious, are *gutta serena,* obstinate pain fixed in a particular part, *tic douloureux, partial palsy, diseased joints,* and *incipient cataract.* In some examples of these maladies, it has occasionally succeeded beyond expectation, and in others it has given an impulse or new action to the part affected, which has been of decided benefit. It enjoys more confidence among professional men on the continent than with those in this country; but several English physicians and surgeons think highly of it, and when other remedies fail, it ought not to be neglected.[1]

NITRE

Nitre is refrigerant and diuretic. Taken in repeated small doses of six or eight grains, it abates heat and thirst in fevers and inflammations, diminishes the force and frequency of the pulse, and increases the secretion of urine. It is, therefore, efficaciously given in rheumatic fever, and all inflammatory diseases, and generally forms a part in saline draughts. But it is improper in hectic fevers. In the foregoing diseases, it is best given in doses of six or eight grains, every three or four hours, dissolved in water, and in combination with the solution of acetate of ammonia, and antimonial wine. In some kinds of *dropsy*, it may be given to the extent of a drachm every morning, dissolved in ale, and in this manner it has cured several cases.

It frequently affords relief in the advanced stages of indigestion, and what are too often called liver complaints. It is most useful in allaying the general increase of heat, and burning in the hands and feet, which are so apt to come on in these disorders towards night; but it likewise seems to add to the good effects of the other alterative

1. *In Thornton's Family Herbal,* p. 692, there is a valuable letter on the use of moxa, from Sir W. Temple, who found it very useful in his own case of gout. Baron Larrey is a strenuous advocate for its employment; and in the two volumes of *Boyle* on *Moxa*, and *Wallace on Moxa*, its uses are fully described.

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means employed, whenever there is a considerable hardness in the pulse. It is not at all adapted to recent cases of indigestion, nor to those of some standing if there is no evident tightness in the pulse. The dose most extensively useful in the former description of case, is five or six grains, which may be made into a draught with twelve drops of tincture of henbane, half an ounce of Mindererus's spirit, and an ounce of water, and taken thrice in the twenty-four hours. If the languor of the circulation be considerable, it will often be better to substitute a drachm of the tincture of orange-peel for the henbane.

A small portion of it allowed to dissolve slowly in the mouth, often removes incipient inflammatory sore throat; and it is a useful adjunct to gargles in that complaint.

In very large quantities, which have sometimes been given by mistake for other salts, it excites vomiting, bloody stools, convulsions, and even death. The best antidotes are opium and aromatics. Copious draughts of a decoction of linseed or barley, or sugar and water, should be taken, and the poison extracted from the stomach by the stomach pump.

NITRIC ACID

Diluted nitric acid is made by mixing one fluid ounce of nitric acid with nine ounces of distilled water. This acid is tonic and antiseptic, and is of much service in *indigestion, liver complaints,* frequent-sickness accompanied with general debility, *old ulcers* depending upon the same cause, and in cases of gravel where *white* sand is deposited. It is also of great benefit in *syphilis* and its *secondary symptoms,* and as a tonic to restore the constitution to a measure of its former health, when it has been injured by the excessive use of mercury. It is often employed with great advantage in those cases of indigestion, and chronic affection of the liver, in which the skin has contracted a yellowish tinge, the bowels being costive, the appetite deficient, and the palms of the hands and the soles of the feet being frequently affected with a distressing sensation of heat and burning. In such instances, it is sometimes of more value than any mercurial preparation whatever. But many of those cases in which it is so beneficial are not truly liver complaints,

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but examples of severe indigestion, which this acid cures from its salutary influence on the stomach. In aggravated cases of syphilis, and secondary symptoms, which resist the powers of mercury, it will be found a valuable remedy, even when dropsy bas supervened.

This acid is indicated in those cases of gravel in which the urine is alkaline, the water turning turmeric paper inserted in it of a brown colour. In such examples, there are generally symptoms of great debility present.

The late Dr. Scott, of Russell Square, strongly recommended a bath, composed of strong nitric and muriatic acid mixed with water, for diseases of the liver; and I have known it of striking and permanent benefit in extensive ulceration of the internal surface of the bowels, in which the most efficient mercurial alteratives were of no service, and which appeared to me quite hopeless. I am persuaded that this bath is invaluable in many cases of disease affecting the stomach and bowels, as well as the liver. The bath is made in the following way; three parts in measure of strong muriatic acid are to be mixed with two of nitric acid, and a pint of this mixture is to have an equal quantity of water added to it. The acid bath is to consist of an ounce and a half of this diluted acid to half a gallon of water, in a wooden tub, which is in general sufficient to form the bath.[1] This quantity may be put into a deep narrow tub, into which the feet are to be immersed for twenty minutes, or half an hour, every night, the legs, thighs, and abdomen, being in the meantime frequently sponged with the same. In the winter, the water may be made warm by the addition of a little hot water; but this is not necessary in the summer. The bath may be employed at first daily, for a fortnight or three weeks, and afterwards, every other day, or only twice a week.

Nitric acid, in the form of lotion, is of great service to foul and indolent ulcers. To form the lotion, one or two drachms may be mixed with a pint of water, with a little of which mixture the whole surface of the ulcer may be touched twice or thrice a day.

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1. Mr. Garden, Chemist, in Oxford Street, manufactures a nitro-muriatic acid, which answers extremely well ; about half an ounce of it, when mixed with half a gallon of water, forming a bath of proper strength.

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The dose of *diluted* nitric acid is from fifteen to thirty drops in two or three ounces of water, or decoction of sarsaparilla, three times a day, sweetened with syrup of orange peel.

The dose of *nitro-muriatic acid is* three or four drops in four or five table-spoonfuls of water.

NUT-GALLS

Are obtained from a species of oak indigenous to Asia Minor. This oak is also found growing in the southern countries of Europe; and the galls are excrescences from the young shoots of this tree, and are produced by the puncture of an insect to deposit its egg. Nut-galls were analyzed by Sir Humphrey Davy, who obtained from five hundred grains of Aleppo galls—

> Tannin or tannic acid, 130 grains; mucilage and other matters, 12 grains; gallic acid, with a little extractive, 31 grains; calcareous earth and saline matter, 12 grains.

Nut-galls are a very powerful astringent; and the infusion, prepared by pouring 6 oz. of water upon 4 drachms of nut-galls, is a very useful injection in *whites* and *gleet*. It forms also an excellent astringent gargle in relaxation of the uvula, and is undoubtedly of great service as an astringent in *prolapsus of the anus* and *womb*.

Gallic acid is one of the most efficacious remedies in bleeding from the bladder, and other parts, in doses of 5 grains in mucilage of gum arabic, repeated as occasion may require.

OIL OF TURPENTINE

See **Turpentine**

OPIUM

The white poppy is a native of the warmer regions of Europe and Asia, but it also grows in colder climates with little diminution of its powers. The larger capsule which it bears, affords, by incision in its cortical part, a milky juice, which, by exposure to the sun and air, becomes concrete, and of a brown colour. This is named opium, and is the product of the plant that is chiefly medicinally employed.

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The medicinal virtues of opium are very great, and often of the first importance in the treatment of disease. It operates as a powerful and very diffusible stimulus, but its primary operation is followed by narcotic and sedative effects in a degree much greater than could be expected from the previous excitement it produces. It acts directly on the nervous system, and when taken into the stomach destroys irritability, and allays pain in the most distant parts of the body, independent of the circulation, and without inducing any change on the composition of the blood. As the principle, therefore, on which opium acts is the same over all the body, the topical application of it is capable of producing similar effects, only in a diminished degree, to those resulting from it when it is taken into the stomach. In moderate doses it increases the fulness, force, and frequency of the pulse, augments the heat of the body, quickens respiration, and invigorates both the corporeal and mental functions, exhilarating even to intoxication; but, by degrees, these effects are succeeded by languor, lassitude, and sleep; and in many instances, head-ache, sickness, thirst, tremors, and other symptoms of debility, such as follow the excessive use of ardent spirits, supervene. Even in small doses it commonly impairs the appetite and digestion, and produces costiveness; yet there are cases of depraved digestion which are benefited by it, which are those where much pain is felt in the stomach, especially soon after eating or drinking.

The principal indications which opium is capable of fulfilling, are supporting the actions of the system, in the advanced stages of *typhus* and *typhoid fever and gangrene;* allaying pain and irritation, in *acute rheumatism, small pox,* and many other diseases; relieving spasmodic action, in *hysterics, epilepsy, Saint Vitus's dance,* etc.*;* inducing sleep; and checking morbidly increased evacuations, as in *dysentery, diarrhoea, hoemorrhage* after delivery, *cough,* etc.

In *typhus* and *typhoid fever,* when given in small doses, frequently repeated, it is sometimes a useful assistant to wine and tonics in supporting the actions of the system; and, at the same time, allaying irritation, and obtunding the susceptibility of those morbid impressions which occasion watchfulness, delirium, tremors, and twitching of the muscles. Some caution, however, is

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required in its exhibition; for if the heat of the body be much above the natural standard, and the skin dry, opium increases these symptoms, augments thirst, and occasions restlessness; but if moisture be coming on, opium accelerates it, and tranquillity and sleep follow. It is hurtful also when there is any disposition to local inflammation, particularly of the chest; and where there is much determination to the head, and when the pupils of the eye are contracted. It very materially assists the bark in curing ague, and prevents it from running off by the bowels. When given at the approach of the cold fit, it sometimes checks its attack, or shortens and renders it milder, and abates the violence of the hot stage by determining to the surface and inducing sleep.

In *spasmodic* and *convulsive diseases,* it is of the greatest service, especially in tetanus, Saint Vitus's dance, hysterics, colic and cholera morbus. In spasmodic cough it is very useful. It is used with the same benefit in all bleedings which are called passive, and which arise from an increased degree of irritability, where the pulse, instead of being strong and full, is small, quick, and intermitting. In the hoemorrhage of pregnant women it is often of signal service.

The action of opium is much modified by *age, sex, temperament, custom,*[1] and *climate,* as well as by combination with other articles. The younger the patient, the more energetic is its action on the system; hence extreme caution is necessary in its administration to infants and childern. Its very energetic action upon infants and children is probably owing to their higher degree of nervous susceptibility; hence in them narcotics generally produce rather irritating than calming effects, and palpitations of the heart and convulsions not unfrequently follow. Women are more susceptible of its action than men, and therefore, a smaller dose

1. Persons long accustomed to its use may sometimes take very large doses with at least a present exhilarating effect. Dr. Russell, in his History of Aleppo, remarks that a Turk, named Mustapha Shatar, on opium-eater in Smyrna, took daily three drachms of solid opium, and even then found a necessity for increasing the dose. M. Dhere, a French writer, mentions the case of a French officer who took a drachm of pure opium daily. Such persons may sometimes appear in tolerable health, but in general they are pale and emaciated.

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produces in them a greater effect, and we more frequently fend among them than among men, those who cannot bear it in any dose. It produces more decided effects in the *sanguine* than in the melancholic temperament,—in the full than in the spare habit of body; and those individuals who- are easily affected by wine, are likewise easily influenced by opium.

In *combination* with aromatics the stimulant effect of opium is increased, and its sedative and narcotic influence lessened; hence the Turks and Persians combine it with confections of aromatics and syrups, and use it as wine for promoting hilarity. When combined with antimonial, it determines more certainly to the surface of the body, and is rendered less likely to impede the other secretions (see *Dover's powder).* With acids, a much smaller dose will produce a full effects and is less likely to affect the head or confine the bowels.[1]

The influence also of peculiarity of habit, called *idiosyncrasy,* must not be overlooked. Some persons cannot take opium at all, without its producing the most distressing effects, or operating in a very singular manner; thus in some it produces restlessness delirium, and convulsions, in others a miliary eruption on the skin. Dr. A. T. Thomson states, *(Elem. of Materia Medica*, vol. i, p. 506,) that he has met with one lady in whom 66 it never produces its soporific effects until the day following that on which she takes it; and an instance of the same peculiarity in a man is mentioned by Lorry, who also details the case of a woman who was thrown into furious delirium, spasms, and convulsions, even by the external application of opium".

The use of opium is contra-indicated in all morbid states of the body where a strong inflammatory action exists, at least until blood-letting, tartarized antimony, and other active measures have subdued the inflammation; then it may be given with excellent effects. It is injurious in pulmonary affections, when the cough is

1. In combination, the medical powers of opium are wonderfully extended, so that there is scarcely a disease in which it may not, during some of its stages, be rendered useful. United with ipecacuanha, it forms the compound ipecacuanha powder, which is of eminent utility in acute and chronic rheumatism, dysentery, diarrhoea, and some other complaints.

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dry and hard, and the expectoration difficult and scanty. In insanity it must be given with great caution, and in the mildest forms, such as acetate of morphia.

Externally employed, opium alleviates pain and spasmodic action. Applied by friction, it relieves the pain of cramp, and even of tetanus, and when rubbed over the abdomen, it alleviates spasmodic pain of the stomach and intestines. This made of employing it will also succeed in reducing the violence of the paroxysms of mania, and of a furious fit of epilepsy, and in relieving the delirium of typhus fever, by removing irritation and inducing sleep. Opiate friction is also used with great advantage in cholera-morbus, hysterics, and hooping-cough.

In exhibiting opium in a *liquid* form, it must not be given in conjunction with oxymuriate of mercury, acetate of lead, sulphate of zinc, iron and copper, carbonates of alkalies, lime water, infusion of galls, and infusion of yellow Peruvian bark, as all these substances decompose it. In combination, however, with vinegar and the vegetable acids, its narcotic power is much increased, while its constipating properties are lessened, and it does not affect the head. The celebrated *Black Drop,* and the *Sedative Liquor of Opium* of Mr. Battley are preparations of opium, which owe their strength and mildness of operation to the manner in which they are prepared with vinegar, or some other vegetable acid.

The dose of this narcotic is very various, according to the state of disease, and the intention with which it is administered. If we wish to obtain its stimulant effect, we give small doses at short intervals; if its sedative influence be required, we administer a large dose at once. It is material to observe, that *in all cases of fever or inflammation, when pain or restlessness calls for the use of a narcotic, the dose must be large enough to induce at once its anodyne effect, without the previous excitement.* One grain of solid opium, or twenty-five drops of the tincture, is the medium quantity to a person unaccustomed to its use; but to remove the symptoms of irritation, or relieve pain, it often requires to be given in a larger quantity. Thus, Dr. Chapman of America, says, that in a case of cancer in the womb he has given the tincture to the extent of three

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ounces, or more, in twenty-four hours, without any other effect than that of relieving pain. In all highly painful and spasmodic affections, the extent of the dose is to be limited only by its effects; thus, in tetanus, one hundred drops of the tincture have been given every hour with admirable effects, and Dr. A. T. Thomson states, *(Cyclopaedia of Practical Medicine, part xv.* p. 150*)*, "in cases of gall-stones and calculi of the kidneys, he has given upwards of eight hundred drops of the officinal tincture of opium in less than twelve hours, without any effect but that of relieving pain and aiding the passage of the concretions".[1]

A quarter of a grain, or eight or ten drops, frequently repeated, is in general sufficient to keep up its stimulant effect; and from ono to two or three grains act as a sedative, and produce sleep : while in tetanus, hydrophobia, and some other alarming diseases, much larger doses are required, and in the last disease, it has been taken, in the solid form, to the extent of two drachms in twelve hours, without abating the violence of the symptoms. It is employed either in the solid or liquid form; being used in the solid state when we wish it to act slowly, or on the stomach or intestinal canal; otherwise it is more convenient in the liquid form.

Morphia or *morphine* is a peculiar saline substance existing in opium, in combination with an acid called the *meconic.* It is to this *meconate of morphia* that opium owes its soporific and narcotic properties; and it is, therefore, the most important of its constituents. Morphia, separated from opium, is now combined with various acids for medicinal purposes, and extensively used in practice in all cases calling for the use of opium. This is considered one of the

1. Robert Hall, the baptist minister, so well known for his eloquence and acuteness, suffered intensely for many years from a pain in his back, for the relief of which he took " in 1812 from fifty to one hundred drops of laudanum every night. Before 1826 the quantity had increased to one thousand drops every night"—Works of *R. Hall, by Gregory,* vol. vi. page 95, *edition* 1832. He never lessened, but rather increased this quantity. In his last sickness his medical attendant says (p. 109), "The pain in his back had been uncommonly severe during the whole night, and compelled him to multiply, at very short intervals, the dose of his anodyne, until he had taken no less than one hundred and twenty-five grains of solid opium, equal to more than three thousand drops, or nearly four ounces of laudanum!!".

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most valuable achievements of modern medical chemistry, the *muriate* and *acetate* of *morphia* especially being esteemed of superior value, as displaying the most powerful soporific and narcotic properties while they affect the head but little, and possess little exciting power. This is true more especially of the *muriate of morphia,* the, best of all the salts of morphia. Its dose is from one quarter to three quarters of a grain, in a pill.

The means of counteracting the bad effects of an over-dose of opium are detailed under the head of *Poisons.*

Opium is the quack's sheet anchor. The various nostrums advertised as "*Cough Drops* for the cure of colds, asthmas, catarrhs, etc." are preparations of opium, very similar to paregoric elixir. *Pectoral Balsam of Liquorice, Essence of Coltsfoot, Grindle's Cough Drops, Squire's Elixir,* and many others are combinations of this kind; and it behaves the patient to be very cautious in their use, for, as Dr. Fothergill has observed, the mischief that has proceeded from the *healing* anodynes of quacks can be scarcely imagined, since opiates generally do much harm in coughs, arising from suppressed perspiration, or an inflammatory state of the system.

OLIVE OIL

The olive tree is a native of the south of Europe, and the north of Africa, but it is cultivated in France, Spain and Italy. The best oil is made in Provence, its excellence arising from the olives being carefully cleaned and garbled; but what we receive in this country comes from Lucca and Florence.

Olive oil is demulcent, relaxing and laxative. It is used internally as a demulcent in cough, and other pulmonary affections, diffused in water by means of mucilage; and is also given internally, in large quantities, to mitigate the action of acrid substances, as some poisons, taken into the stomach. Externally applied, it is a very useful relaxant to the skin; but is generally used as a vehicle for more active substances, in the form of embrocation ; thus it is an excellent solvent of opium, which can, through its means only,

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be used in frictions, with any advantage. It is also used as an adjunct to glysters in dysentery and intestinal abrasions.

OXYDE OF ZINC

Oxyde of zinc is sometimes called the flowers of zinc, and is tonic and antispasmodic. It has been praised for its virtues in *epilepsy, St. Vitus's dance, hooping cough, asthma* and other *spasmodic affections,* in which it is frequently of much service. Gaubius, a foreign physician of great judgment and celebrity, used to recommend it as a remedy for these diseases, in the strongest terms. It may be given in doses of from two to eight grains, twice or thrice a day, made into pills, with extract of gentian or chamomile.

The zinc ointment of the shops is a useful application to sore eyes, chronic inflammation of the eye-lids, and all ulcers which require a stimulating application.

OXYMURIATE OF MERCURY

See **Bi-chloride of Mercury**

PAREIRA BRAVA

This is a perennial plant, growing in the West India islands, and in South America. The root, which is the part employed, is brought to us from Brazil; it is long; thick, and covered with a furrowed brown bark.[1] It has little or no smell; the taste is bitterish, blended with a sweetness like that of liquorice.

It has been for many years in high repute among the Brazilians as a remedy in all obstructions of the urinary organs. The common people of Jamaica use a decoction of it for pains and weakness of the stomach proceeding from relaxation, and it is probable that its

1. "It is woody, fibrous, hard, twisted, of the size of a child's arm, brown externally, of a yellowish grey colour internally, and marked with concentric circles." *Edwards's Materia Modica,* p. 222.

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effects in urinary disorders are due chiefly to its tonic influence on the bladder. Geoffry, in a paper inserted in the *Memoirs of the Royal Academy of Sciences* for the year 1710, reports very favourably of it in ulceration of the kidneys and bladder; and Sir B. Brodie also speaks strongly in its favour. See his *Lectures on Diseases of the Urinary Organs*, p. 170. One of the most prominent symptoms of chronic inflammation of the bladder is an abundant discharge of a ropy adhesive alkaline mucus, and we have Sir B. Brodie's testimony to the fact, that the use of the decoction of the root of the *pareira brava* is here frequently productive of excellent effects.

The decoction is prepared by simmering four ounces of the root in three pints of water, until it is reduced to two pints, and then strained; the dose of this decoction is a small tea-cupful (about four ounces) twice or thrice a day. A little tincture of henbane may sometimes be advantageously combined with it.

PAREGORIC ELIXIR

This is very similar to the *compound tincture of camphor* of the shops, and is made by mixing together two scruples of camphor, one drachm of hard opium in powder, one drachm of acid of benzoin, and two pints of proof spirit; which are allowed to digest for fourteen days and afterwards filtered.

It is advantageously employed to allay irritation and procure rest in habitual cough, *chronic asthma,* and the latter periods of *hooping-cough*. It is most appropriate in *dry coughs*. It may also be employed with effect, for the same purposes, in recent cold and cough, after the inflammatory symptoms have abated; but it is highly improper in all cases of cough attended with much fever, pain in the chest, and full quick pulse. Half a fluid ounce of this elixir contains nearly a grain of opium. The dose to procure ease in cough is from one to two tea-spoonfuls occasionally; and three tea-spoonfuls where quiet rather than sleep, is required.

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PEPSINE

Is a preparation of *gastric juice*, chiefly obtained from the stomachs of sheep, and is usually given in the form of powder. It is recommended as a powerful digestive agent, in cases of want of appetite, of sluggish and painful digestion; of vomiting, water brash, consumption, and in the weakness of stomach found at the commencement of the convalescence from severe fever. It is an *artificial*, and therefore *partial* substitute for a *natural* process. Gastric juice prepared by a healthy animal is by means of this powder mixed with the food, instead of that which the patient's stomach ought to prepare. It acts in the body very much as it would out of the body, under the same circumstances of heat and motion. The chewed meat is dissolved by it in the stomach, and the putrefactive process is arrested by it in the intestinal canal. It is, therefore, a substitute for the natural secretion of the stomach, and to a certain extent supplies its place.

It is best to begin with five grains of pepsine given with the meal, or before it, and repeat it twice or thrice a day, gradually increasing the dose to ten or twelve grains. If regular meals are eaten, then it is best taken spread as a sandwich between two thin slices of bread at the commencement of the dinner. If the patient is so ill that the food is obliged to be administered more frequently and in small quantities, so as to keep up a continuous supply, five grains of pepsine powder may be given in a little syrup of orange or lemon, after meals.

Dr. Chambers has prescribed pepsine with great advantage in consumption, hysterical vomiting and nausea, and pain in the stomach after meals. He says "Give half a mutton chop with pepsine the first day or two; and if that is digested well, try a whole chop the next; but remember, that then you have got to the end of your tether, and that the digestion of a larger quantity will not be at all assisted by artificial means". He adds, "In a case of diarrhoea and mucous vomiting, occurring in an old victim of atonic gout, the stools became more natural and less frequent, and strength was regained, on taking pepsine and mutton chops instead of opium and acetate of lead".

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Pepsine is now given in good white wine, and *pepsine wine,* and *pepsine,* may be procured of excellent quality from Mr. Squire, 277, Oxford Street, and from Morson and Son, 19, Southampton Row, Russell Square.

Rennet Wine is prepared by Mr. Twinberrow, 2, Edwards Street, Portman Square, which merits confidence as an assistant to digestion. Good *rennet wine* may be procured also from Squire, 277, Oxford Street, and from Morson and Son, 19, Southampton Row.

PHOSPHATE OF ZINC

Is a new medicine, and has been found of great benefit in epilepsy by Dr. Barnes. The dose of the phosphate of zinc in powder is from two to five grains, two or three times a day; made into pills with extract of liquorice.

PHOSPHOROUS ACID

Dr. Rowbotham strongly recommends this acid as an efficacious remedy in asthma. He says it has given marked relief when all other remedies had failed. The *dose* is from ten to twenty minims, twice or thrice a day in water.

PILE-WORT OINTMENT

The Pile-wort or *Ranunculus Ficaria,* usually flowers in March and April. It should be gathered when full blown, *chopped as fine as possible,* (after the dirt has been removed from the roots, and the plant washed and dried with a clean cloth). The chopped herb is then to be boiled in lard for about two hours, constantly stirring it, and then strained. About *double* the quantity by *weight* of the fine chopped pile-wort is to be boiled with half the quantity of lard, say six pounds of the herb to three pounds of lard or "fresh liquor". "Fresh liquor", or lard without salt, is best. Strain it off through a small hair sieve, and keep the ointment in a cool place.

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This is an excellent ointment for piles, prolapsus of the anus, and all discharges from that part.

POMEGRANATE BARK

This bark comes from Asia and the West Indies. It is a mild ringent, and was formerly much used in *chronic diarrhoea* and *dysentery.* The decoction is now much esteemed as gargle in sore throats, and as an injection. The ordinary way of making the decoction is to boil four drachms of the bark with six ounces of water, of which six drachms may be taken every three hours; or it may be taken in the form of powder, in doses of from half a drachm to a drachm, in water. The powder is useful to check diarrhoea in the last stage of consumption.

It is likewise employed as a remedy for tape-worm in the form of a strong decoction, prepared by boiling two ounces of the bark in a pint and a half of water, until it is reduced to nine ounces, of which a wine-glassful is given when cold, and repeated every half hour to the fourth time. It generally produces nausea. in this mode of taking it.

POPPY-HEADS

Poppy-heads, or the dried capsules of the poppy, possess anodyne properties, and their active matter is extracted by decoction with water. They are chiefly employed either alone, or in conjunction with chamomile flowers, boiled in water, as fomentations to inflamed and ulcerated surfaces, in which manner they are often of great service in allaying pain and irritation. The decoction is made by boiling for a quarter of an hour four ounces of the white poppy-heads bruised, in four pints of water, and then straining. The seeds should not be rejected in making this decoction, as they contain a considerable portion of bland oil, which increases the emollient quality of the decoction.

PRUSSIC ACID

This peculiar acid, commonly called *hydrocyanic acid,* exists in a

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great variety of native combinations in the vegetable kingdom, the principal of which are *bitter almonds,* the *cherry laurel,* the leaves of the *peach tree,* the kernels of fruit, pips of apples, etc. The prussic acid appears to be the most abundant in the thin pellicle that envelopes the kernel; the fleshy parts of these fruits do not contain it, and even the berries of the *cherry laurel* may be eaten with impunity; yet the distilled water, and oil of this plant, is the most destructive of all narcotic poisons.

In a sufficient dose, it instantly destroys life, by extinguishing the nervous energy of the body, and the quantity necessary to produce these fatal effects is very small. It is said that a very few drops let fall on the eye, will speedily kill small animals, as dogs, cats, etc., and smelling the vapours sometimes occasions vertigo, spasmodic constriction of the lower part of the windpipe and other deleterious effects.

But skilfully employed in small doses, it is sometimes very useful in pulmonary *consumption,* and *spasmodic coughs* of every description, particularly *asthma, chronic cough* and *hooping-cough.* Linnaeus informs us that it was frequently used in Holland in pulmonary consumption, and some eminent medical men of our own country appear to have thought highly of it as a remedy in this complaint, and especially in spasmodic coughs. It would seem to be most beneficial in coughs and consumption originating in great irritation and disease in the windpipe. It is also useful in those instances of indigestion which are attended with pain and acidity of the stomach, and accompanied with heat and soreness of the tongue; but, upon the whole, it is much inferior to many other remedies for this disorder. The dose is from two to eight drops, which may be taken in distilled water, almond emulsion, or infusion of Peruvian bark, and repeated twice a day.

It has lately been very much praised as a remedy in various spasmodic disorders, especially in *asthma, St. Vitus's dance, epilepsy,* and *hooping-cough.* The very strong opinion given by some physicians respecting its wonderful efficacy is not worthy of confidence.

As a local application, it is very efficacious in allaying the

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itching and *tingling* which are so distressing in *tetters,* and other *cutaneous eruptions,* which appear on the face, head, hand, etc., and it nut only allays the itching of these pustules, but will often be of much service in promoting their cure. The lotion for external use, is made by mixing a drachm of the by drocyanie acid with an ounce and a half of rose-water, with which the part affected may be washed three times a day. It may be used advantageously in the following combination, two drachms of the prussic acid, sixteen grains of the acetate of lead, half an ounce of spirit of wine, and eight ounces of distilled water, which are to be mixed together for a lotion. This soothes the irritability of the diseased surface, and disposes the skin to renew its healthy action.

The cherry laurel water (*aqua lauro-cerasi)* acts in the same way as the medicinal prussic acid, but is less energetic. The dose is from six drops to half a drachm. It is much used on the Continent.

QUASSIA

Quassia wood comes from Jamaica and the Caribbean islands, where it is called the bitter ash. It is said to owe its name to Quassia, a negro slave, who discovered to Polander the wood of this tree, as that which he had employed with success as a secret remedy in the malignant endemic fevers of Surinam. It is a powerful bitter tonic, which is used with much advantage in debility of the stomach and intestinal canal, nervous irritability, intermittent and bilious remittent fevers, looseness, and irregular and atonic gout. It has been said to be highly useful in that combination of debility and hysterics to which the female sex is so prone. Here it is reported to afford more vigour and relief to the system than the Peruvian bark, especially when combined with a small portion of sulphate of zinc. In typhus or remittent fevers, (says Murray in his *Apparatus Medicam*) it may be administered in every stage of the disease, as it neither quickens the pulse, nor augments the animal heat, nor operates on the bowels.

Infusion is the best form of administering quassia, which is made by pouring a pint of boiling water on a drachm of the wood,

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which must be strained when cold. The dose is from one to two ounces, repeated twice or thrice a day.

RHATANY ROOT

Is a powerful astringent and tonic, and may be used as such in most diseases of debility and relaxation. It has been long known to the manufacturers of Port Wine, who use it to impart the astringency which that wine always contains. It is particularly useful in some cases of chronic diarrhoea and dysentery.

It is most frequently administered in infusion, decoction, or extract. The infusion is made with half an ounce of the bruised root to six ounces of boiling water, poured on it; of which the dose is from one to two ounces. The decoction is made by boiling two ounces of the bruised root in a pint of distilled water; the close is the same as of the infusion. A tea-spoonful or two of the tincture in water, two or three times a day, is a convenient mode of taking it, and also an efficacious one.

RHUBARB

The plant which yields this invaluable root is a native of China and Tartary, and arrives at considerable perfection when cultivated in this country. Many individuals have reared large quantities of it in Great Britain, and some of it extremely good; yet so powerful and unreasonable is prejudice, that very little of it can be sold. There are two principal varieties of rhubarb known in the shops, *Turkey* rhubarb, and *East Indian* rhubarb. The *Russian* or *Turkey* rhubarb is in roundish pieces, perforated with a large hole, of a yellow or reddish colour on the outside, somewhat soft and friable, and, when broken, exhibiting many diverging streaks of a beautiful bright red colour.

It is stomachic and astringent, or purgative, according to the extent of the dose in which it' is administered. In the dose of one, two or three grains, twice or thrice a day, it acts as a valuable stomachic, stimulating the stomach, increasing the appetite, and promoting a healthy flow of bile; and is of much service in

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indigestion, low spirits, jaundice, and a weakened relaxed state of the bowels. It acts chiefly on the stomach and first intestines, and in these complaints may be advantageously combined with soap, dried sub-carbonate of soda, ipecacuanha, or extract of gentian. A pill of two grains of rhubarb, one of ipecacuanha powder, and one of soap, repeated three or four times a day, is sometimes of superior benefit in indigestion and bilious complaints, especially of elderly persons.

In doses of from twelve grains to a scruple it opens the bowels freely. Its purgative operation is mild, and it may be given to the youngest infants. It is particularly adapted for the majority of cases of diarrhoea, as it evacuates any acrid matter that may be offending the bowels, before it acts as an astringent; and from its power of strengthening the intestinal canal, it forms a suitable and valuable purgative for children, in whom that canal generally possesses a great deal of relaxation and morbid irritability. As a common purgative in the disorders of childhood, it is far preferable to calomel, being equally effectual in its operation, without possessing any deleterious principle. When it is intended to act on the bowels, it should be administered in conjunction with about fifteen grains of super-sulphate of potash, which covers its taste, and causes it to act more readily and with greater certainty. This combination has been praised by physicians of great ability as very efficacious in curing the costiveness, bilious affections, enlarged bellies, and other disorders of children, in which it is now a fashionable but pernicious custom to administer calomel.

The powder of rhubarb sprinkled on foul indolent ulcers is sometimes of great use in exciting in them a healthy action.

SAL AMMONIAC

This salt is a compound of muriatic acid and ammonia. It is found as a product of volcanoes, and the eruption of Etna in 1811, afforded as much sal ammoniac as supplied all the manufactories and apothecaries' shops in Sicily; but the greater part of that which is employed in medicine and the arts, is artificially prepared in the north of England.

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It was formerly considered a powerful aperient and attenuant of viscid humours, but is now not so much used as an internal medicine as it deserves to be. It is, however, frequently employed, dissolved in water, *as a lotion to indolent tumours* and *chilblains,* and from its stimulus is very efficacious in allaying the irritation, and reducing the size of such swellings. It is the active ingredient in the following plaster, which is one of the best local applications to the chest in severe coughs and pulmonary consumption. Take of soap, one ounce; lead plaster, two drachms; which are to be liquefied together, and when nearly cold, half a drachm of sal ammoniac, finely powdered, is to be added. It is then to be spread on leather, and directly applied to the chest, being renewed every twenty-four hours, otherwise the intention is lost.

One ounce of this salt dissolved in nine ounces of water, an once of spirit of wine being afterwards added; forms an excellent lotion for indolent tumours, scrophulous swellings, etc., but, on account of its stimulus, it is not proper where there is active inflammation in the part.

SAL VOLATILE

This is the aromatic spirit of ammonia of the shops, and is a useful stimulant cordial in languors, fainting and flatulent colic. The dose is from half a tea-spoonful to a tea-spoonful, in any agreeable vehicle. It is a grateful medicine to the stomach; and forms an adjunct to many mixtures which are prescribed for the relief of nervous complaints and debility.

SAL POLYCHREST

This is a *tartrate of soda and potash;* it is very similar in its operation to the sulphate of potash, and is a very useful adjunct to rhubarb, the operation of which it quickens and renders more certain. Ten grains of *sal polychrest* and nine or ten of powdered rhubarb, is an efficacious purgative for children, pregnant women, and other persons in delicate health. It is a cooling aperient that beneficially influences the blood.

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SALT OF WORMWOOD

Salt of wormwood and salt of tartar are the same substance—the carbonate of potash. In small doses of eight or ten grains, dissolved in a little rose-water, and repeaded twice or thrice a day, it is considered to be of great service in indigestion and bilious complaints, especially where there is a good deal of morbid acidity in the stomach. A bitter infusion, such as infusion of calumba or gentian, should always be added to it; but it should not be much indulged in, so as to be habitually resorted to.

It may be used for all the purpose for which the carbonate of soda is generally employed, but is not so pleasant a medicine. One scruple of this salt, and four drachms of lemon juice, with two or three ounces of water, form the common saline effervescing draught, which is so grateful and very serviceable in relieving heat, and quenching thirst, in fever.

SARSAPARILLA

The Sarsaparilla plant is a native of youth America and Virginia. The best sarsaparilla grows on the borders of a lake on the north of the Cerra Unturan, not far from Esmeralda; and is celebrated all over South America by the name of *Zarza del Rio Negro.* Baron Humboldt states, that nearly five thousand quintals are annually exported from Vera Cruz.

It is demulcent and alterative, and may often be given with great advantage in various *obstinate internal chronic diseases,* and in *swellings, ulcerations,* and other local maladies *depending upon constitutional indisposition.* I have found it of inestimable value in cases of extreme irritation and debility of the mucous membrane of the digestive organs. Some physicians seem to doubt its medicinal powers !—a doubt at which indeed we may wonder, and which proves how soon some men contract doubts, and how ready they are to express them. Unquestionably, it is frequently of incomparable utility in chronic diseases even when used alone, and certainly of great assistance in promoting and establishing the curative effects of an alterative course of mercury in many different

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complaints. Maps eminent practitioners of the present day are very partial to its employment. It was first introduced as a medicine of greet efficacy in the cure of *lues venerea;* and I firmly believe that, given in conjunction with five grains of blue pill, or Plummer's pill, every night, or every second night, it is equal to the perfect cure of the majority of these cases, and in whatever form they may appear : from such treatment the constitution cannot suffer, while the diseased ulcerations and swellings will be effectually removed. In *nocturnal pains* in the limbs, *painful enlargements* of the knee and elbow joints, *nodes,* and *cutaneous ulcerations,* arising from a *syphilitic taint,* it is superior to any other remedy. Some time since I had a patient who had taken a vast deal of mercury for a syphilitic complaint, with little benefit to the disease for which it was taken, but to the great injury of his general health and strength; his pains were constant and severe, accompanied with loss of appetite, strength and flesh, numerous swellings and ulcers in different parts of the body, and a quick small pulse; indeed, the poor fellow was reduced to so extreme a state of disease and pain, that he was attacked with severe fits of epilepsy for some days in succession, and we had little hope of his recovery. Notwithstanding; the decoction of sarsaparilla restored him.

Since the preceding remarks were first written, another very remarkable case has come under my care, establishing the uncommon efficacy of this remedy. It occurred in the person of an officer in the India Company's Service, whose life was despaired of from the deplorable condition of his general health and appearance, but who from close medical attention, and especially from the efficient use of sarsaparilla, is now quite equal to all his military duties. Numerous other cases have proved to me the extraordinary virtues of this celebrated medicine, and my opinion that it will often effect the most salutary changes, and such as, perhaps, no other medicine will secure, is one of personal experience.

This remedy is best given in powder or pills. The compound decoction is likewise a form in which it is commonly given, and the addition of twenty drops of antimonial wine to each dose

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augments its alterative effects. The manner of making this decoction is stated in the *Collection of Prescriptions.*

The powder of sarsaparilla is an invaluable alterative, and is commonly far more efficacious than the decoctions. The dose of the powder is from one to two drachma, twice or thrice a day, in water; and the patient should be careful to procure it fresh, and of the best quality.

The hydro-alcoholic Compound fluid Extract of Sarsaparilla. Water does not take up all the active principles of sarsaparilla root, but they are soluble in weak alcohol, which forms this preparation of *The General Apothecaries' Company,* 49, Berners Street, and by which the full virtues of sarsaparilla may be secured. The dose is from two to four tea-spoonfuls, in water, twice a day.

Still in some irritable states of the stomach the powder of sarsaparilla will be found to agree better, because it is thus taken in water, and in the simplest state. On the whole, the powder of sarsaparilla is the most efficacious form in which that valuable alterative can be taken.

SALACINE

See **Willow Bark**

SCARIMONY

This purgative substance is usually imported from Smyrna. In its operation it is closely allied to jalap, but is more active and irritating, although not so nauseous. It is inadmissible in inflammatory conditions of the alimentary canal. It is principally used as a smart purgative for children, on account of the smallness of the dose necessary to produce the effect, the slight taste, and the energy of its operation. One of the best modes of administering it is in the compound scammony powder of the shops; of which the dose for an adult is from ten to twenty grains, and for children from six to twelve years of age half that quantity, and a quarter of a grain of calomel may be added to it with advantage; the whole being taken in some thick vehicle, such as jam or jelly.

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SENEKA

Seneka or Senega, is a native of the United States of America. It is a stimulant to the mucous membranes and skin, and is expectorant, acting especially on the bronchial tubes—the air passages; and is therefore, useful in chronic cough and humoral asthma. It is a very valuable remedy in some cases in the latter stages of *bronchitis,* in aged and debilitated constitutions; and its efficacy is greatly increased in combination with sesqui-carbonate of ammonia

It is best given in decoction. Ten drachms of seneka root is mixed with two pints of water, and boiled down to one pint, of which the *dose* is from two to four table-spoonfuls, three times a day.

SENNA LEAVES

The plant which yields the senna leaves, is a native of Upper Egypt, and is imported from Alexandria. The best Alexandrian grows in the Vallies of Nubia; but senna is also cultivated at Tinivelly, on the Malabar Coast, and is imported in large quantities into this country under the name of East Indian senna. It is milder in its operation than the Alexandrian species. In this country it is usually sold at about six pence per ounce; yet Burckhardt, the traveller, states, that the Bedonin Arabs, who are the chief collectors of senna, sell it to the merchants of Esne, at about one pound sterling per camel load (from 400 to 500 weight.)

Senna is a purgative very frequently employed, having a considerable degree of activity, without being liable to be harsh in its operation. The best form of administering it is that of watery infusion, two drachms being infused in four or five ounces of tepid water, to which three or four drachms of compound tincture of cardamoms should be added to prevent griping. Sugar or manna covers its taste, and is a suitable addition when it is given to children. The dose of the above infusion is from one to three or four ounces.

Senna may be advantageously given in combination with any of the purgative neutral salts, as Epsom salt, Glauber's salt, or

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soluble tartar. Two or three drachms of Epsom salt, an ounce and a half of infusion of senna, and a drachm of tincture of senna, form the common black draught in so general use among apothecaries.

The tincture of senna of the shops is similar in composition to the famous *Daffy's Elixir;* and, when good, is very little inferior to it.

SERPENTARIA

This (the *Aristolochia Serpentaria)* is a plant usually rising eight or ten inches in height, a native of Virginia and Carolina, having a slender, flexuous stem. It has an aromatic smell and a warm, bitter, pungent taste.

It was probably first used in America as a remedy against the bites of serpents, whence its name. It is a warm cordial aromatic tonic, and acts as a diaphoretic. It has been much employed as a cordial medicine to support the powers of life, and promote a free perspiration in low and *putrid fevers.*

It is a very appropriate and useful medicine in the *advanced stages of malignant ,fevers,* when the powers of life are greatly reduced, and yet the skin is hot and dry; hence it is of excellent use in confluent small-pox, especially when there is a receding of the eruption.

When joined with bark it often proves of great service, since it makes the bark more cordial, and to sit easier on the stomach. *Agues* yield sooner to the bark mixed with serpentaria than without it, and it forms properly one of the ingredients in the compound tincture of bark.[1]

In some cases of *indigestion,* the circulation being very languid, the pulse feeble, and the skin dry and harsh, the serpentaria is useful.

Dr. Robert Thornion says *(Family Herbal,* p. 744)—

1. I have given it in cases of protracted intermittents, especially when these have been combined with cough; and it bas removed the disease after quinine and arsenic had faild. Thomson's *Materia Medica.* vol. i. p. 193.

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"The editor of this work has frequently employed the serpentaria in the low stages of small-pox, and has often found it to do wonders in stopping mortification, joined with opium and other cordials; a remarkable instance of which occurred in the case of Mr. Cossart. From a bad fracture mortification came on, and it advanced so rapidly, attended with delirium, that Mr. Astley Cooper and Mr. Luxmore, eminent surgeons, declared all hopes to have vanished, when I ordered serpentaria, which was given, two drachms of the tincture with ten grains of powder, and five drops of laudanum, every three hours, which calmed all the outrageous symptoms, stopped the mortification, and enabled an operation to be performed, by which this gentleman's life was preserved."

It is usually given in the form of infusion, made by pouring twelve ounces of boiling water on an ounce of the bruised root, of which, after straining, an ounce and a half, or three table-spoonfuls, may be taken twice or thrice a day, with or without a little of the tincture. The dose of the tincture alone is one, two or three tea-spoonfuls in water; and of the powder from six to thirty grains.

BLACK SNAKE ROOT

This is a new American remedy for rheumatism, and some cases of neuralgia. The officinal name is *Actaea Racemosa.* It is narcotic and antispasmodic, and seems to have a special influence on the womb. Dr. Simpson, of Edinburgh, has strongly recommended it in rheumatism, and in that peculiar state of hypochondriasis sometimes found in women after their confinement. He says, "I have found it in my own case repeatedly cure an attack of lumbago with wonderful rapidity". It is rather agreeable to the taste, and acceptable to the stomach. It is best taken in the form of tincture, of which the dose is from twenty to thirty or forty drops, thrice a day, in water.

SOAP

Castile or hard soap is an article often employed medicinally, both internally and externally. Given internally, it corrects morbid acidity

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in the stomach, and favours the natural action of the bowels. It is, therefore, of service in indigestion, bilious complaints, jaundice, gravel, and stone; but in all these diseases it may be advantageously united with rhubarb, ipecacuanha, or extract of gentian. As an external remedy, it is efficaciously used, dissolved in spirit of wine, in frictions to sprains and bruises, and it forms a valuable ingredient in the soap liniment. Dr. A. T. Thomson states, that he has seen much benefit derived from rubbing the tumid bellies of children labouring under mesenteric or worm fever, with a strong lather of soap every morning and evening.

The dose internally is from three to twenty grains made into pills, and repeated twice or thrice daily.

SOLUTION OF ACETATE OF AMMONIA

See **Mindereus's Spirit**

SPIDER'S WEB

It is the fashion of these days for medical men to recommend medicines of the most active and even poisonous properties, many of which can be obtained only by the exercise of sound chemical knowledge, and very careful manipulations, and it is equally the fashion for people to take them freely;— practice both unnecessary and dangerous. It is invincibly repugnant to reason and experience frequently to employ *poisons* in order to restore health and strength; there are many simple remedies which are at least equally beneficial with those opcrose and dangerous medicines, and I would now introduce one to the confidence of my readers. The cob-web of cellars, barns, and stables, is a valuable remedy for ague, (*see* AGUE*);* and it also allays diseased irritability, and calms irritation, both of body and mind, often in a surprising manner. If it operates well, when the pulse is quick, frequent, irregular, and irritated, it becomes by its influence, slow, calm and regular. Some American physicians who have taken it, say it produces a calm and delightful state of feeling, succeeded by a disposition to sleep. It will thus often tranquillize much better than opium or henbane, and its

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soothing properties point it out as a valuable palliative in the advanced stage of consumption—in—asthma in chronic hysterics, and in other spasmodic complaints.

Dr. Robert Jackson details a remarkable case of asthma, in which the tranquillizing effects of this substance were conspicuously evinced. The complaint was hereditary, and connected with malformation of the chest. The patient was unable to lie down in bed from a sense of suffocation, and was obliged to take the little sleep he could get in a half-sitting posture, being supported by pillows. In this distressing condition he one night took twenty grains of the spider's web, and obtained from it a sound and uninterrupted sleep all night, "a blessing to which he had been an entire stranger above six years".

The dose is from five to ten or twenty grains at bed-time, rolled into a pill. To cure ague it must be given thrice a day.

SPIRIT OF HARTSHORN

This spirit is stimulant and antacid, and is a useful cordial in lowness of spirits, fainting, and languor; for which purpose it may be taken internally, in doses of fifteen or twenty drops, in any agreeable vehicle. It should not be taken in less than half a tea-cupful of liquid. Twenty drops of this spirit, taken in a tea-cupful of water, and repeated five or six times in each intermission, has sometimes succeeded in curing ague after the Peruvian bark has failed; and it is of great service in the bites of serpents and other venomous creatures.

Externally, it is used as a grateful stimulant to the nostrils in case of fainting and languor; and united with two-thirds, or one-half the quantity of olive oil, it forms the common domestic stimulating liniment for sore throat, and relaxation of the throat. This liniment, when rubbed freely over the external part of the throat, is very useful in these complaints.

SQUILL

Squill is the bulbous root of a plant which grows on the sandy

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shores of Spain and Italy. It is a stimulating expectorant and diuretic; and is of great service in chronic cough and asthma, and in dropsy from disease of the heart. In large doses it vomits and purges, but is scarcely ever given with either of these intentions.

Its medicinal powers in *cough* and *dropsy* were very early known, and it still retains its character as a remedy of great efficacy, when judiciously exhibited. It is principally adapted to the *coughs, asthma* and *difficulty of breathing of* old people, in which there is an accumulation of mucus within the chest; and in all cases combining it with ipecacuanha, or tartarized antimony, increases its expectorant effect. Plentiful dilution also with warm mucilaginous liquors, contributes in no small degree to its successful operation. It deserves particular attention, that it can never be employed when the skin is hot and dry, with a hard pulse, or where other marks of inflammation are present; as it then checks instead of promoting expectoration. It is sometimes useful in the latter stages of hooping-cough. The compound squill pill is a combination of squill with ginger, hard soap and gum ammoniac, and is a valuable expectorant; the dose of this compound pill is from five to eight grains, twice or thrice a day.

As a diuretic, it is always given in substance, under the form of either the recent or the dried root. The dose of the former is from five to fifteen, of the latter from one to three grains; the smaller dose being given at first every six hours, in the form of a pill, and this increased slowly until the diuretic effect is obtained. Its nauseating operation ought to be avoided by the due regulation of the dose. Its efficacy in dropsy is well ascertained, and is promoted by combination with calomel; indeed it is more frequently employed in this combination than alone. A little opium should be added to prevent its running off by the bowels. The union of squill with calomel is well adapted to the treatment of dropsy, connected, as it frequently is, with obstruction or chronic inflammation in the heart or liver, and is more successful in this case than any other diuretic. Two grains of dried squill, with a grain of calomel, and a grain of extract of henbane, forms a valuable pill in many dropsical cases, which may be administered every six hours till it takes effect.

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There is a syrup and an oxymel of squills sold by druggists, which are frequently used in doses of one or two tea-spoonfuls; to relieve old coughs.

STEEL *See* Iron

N.B.—All preparations of iron should be taken immediately after a meal.

STRYCHNIA or STRYCHNINE

This is the active alkaline principle of *nux vomica*. The nux vomica tree is large, a native of the East Indies, found on the coast of Coromandel, Cochin China, and in other places, and called there by the name of *Caniram* The nut is flat, round, about an inch broad, and near a quarter of an inch thick, with a prominence of a grey colour, covered externally with a velvety down, being internally hard and horny. It is intensely bitter.

Strychnine is a powerful stimulant to the spinal cord, and is in large doses a virulent poison. It is scarcely adapted to domestic use. Notwithstanding, it is said to have been employed medicinally with good effects, especially in waterbrash, costiveness, and paralysis of the throat and lower limbs, or of one side. Dr. Chambers, physician to St. Mary's Hospital, thinks highly of the use of strychnine as a tonic in some cases of dyspepsia, and even of dilatation and want of power in the heart. He says (*Clinical Lect.* p. 207) "I often join with iron small doses (from 1/20 to 1/14 of a grain) of strychnine. If the pulse intermits, this remedy sometimes exhibits its tonic powers over muscular fibre by restoring regularity of beat, and thus gives you the satisfaction of feeling the good you do with it". He believes (p. 328) that strychnine has great power in imparting tone and invigoration to the involuntary muscles of the stomach, and he prescribes it in the sense of oppression found in indigestion, especially where bark, iron or other tonics in any way disagree. I am, nevertheless, fearful that medical men are getting too fond of prescribing this active poison. The dose of the *alcoholic extract of nux vomica* is a quarter of a grain, given night

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and morning at first, and afterwards three or four times a day : it may be increased to a grain at a dose.

But it is best to give it in the form of *strychnine.* One grain of pure strychnia may be dissolved in one drachm of distilled vinegar, of which solution six minims or drops may be given in half a wine-glassful of water, thrice a day, the dose being cautiously increased to twelve or twenty minims. Should the remedy display its influence on the system by exciting involuntary tetanic movements or convulsions of the limbs, then the medicine must be either discontinued or much lessened in the dose.

If charcoal is swallowed immediately after strychnia it will be the proper antidote, as it will decompose the strychnia; but when the poisonous effect of strychnine has been manifested, camphor is the most likely stimulus to destroy that poisonous effect. Charcoal is the chemical, and camphor the vital, antidote to the poison of strychnia.

SUGAR OF LEAD

This is a very powerful astringent and sedative, of marked advantage in restraining *profuse bleeding* from the lungs, womb, bowels, nose and almost all other internal parts; but from its activity it must be exhibited with caution. The alkalies, alkaline earths, most of the acids, alum, borax, all sulphates and muriates, soaps, ammoniated and tartarized iron, tartarized antimony, and distilled water decompose it, and should, therefore, never be given with it. It is not uncommon to administer with it Epsom salt dissolved in rose water, which decomposes it, and renders it useless. Physicians generally consider this salt to be one of the most valuable resources of physic, in case of alarming bleedings from any internal organ. Some think it of greater efficacy in stopping haemorrhage from the lungs and womb, than any other known remedy, and believe its application to be equally safe and manageable, an opinion in which I cordially agree. It should be invariably united with opium. Two grains of the acetate of lead, united with one-fourth of a grain of opium, and made into a pill with a little conserve of hips, may be given every six hours; in any urgent case of haemorrhage it may

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be exhibited every hour, until the bleeding is restrained, and not only so, but the dose of the acetate of lead may be increased to three grains.

Ten or fifteen grains of this salt, dissolved in half a pint of distilled water, or in the same quantity of common water, with the addition of half an ounce of distilled vinegar, forms an excellent lotion for inflamed surfaces.

SULPHATE OF QUININE

This is an invaluable preparation of Peruvian bark, which concentrates, in a small compass, all the virtues of the powder of that celebrated substance, at least in the majority of cases; and is, therefore, generally resorted to by medical men on account of the smallness of the dose necessary, acid the great ease with which it sits on the stomach.

M. M. Pelletier and Caventou, eminent Parisian chemists, first procured *quinine* or *quinia,* from the *yellow* bark of the shops. It is an alkaline salt, which in conjunction with sulphuric acid, forms the *sulphate* of *quinine* or *quinia.* This appears as a pure white powder, in silky needles, scarcely soluble in cold water, more so in boiling water and completely so in dilute sulphuric acid. It is also very soluble in spirit of wine.

Eight grains of it are equal to about an ounce of the bark in substance; so that the ordinary dose is from one to three grains, twice or thrice a day, or oftener, made into a pill with extract of gentian, or combined with cinnamon water and gyrup and tincture of orange peel.—See the *Prescriptions.* Where it is necessary to administer larger doses at short intervals, as much as five grains have been given every three hours. It is very successfully employed for the cure of ague, brow-ague and as a tonic and febrifuge in indigestion, general debility and all other complaints for which the bark itself is recommended.—*See Bark.*

I have remarked under the article Bark, that those diseases are most benefited by it which assume a regular intermittent type and would here add that this obtains even in local affections. A curious

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case recorded by Sir B. Brodie illustrates this in an instructive manner. A gentleman, who had lived many years in a warm climate, became affected with *spasmodic* stricture of the urethra, *which recurred every alternate night* about twelve o'clock and continued until five or six O'clock in the morning. Sir B. Brodie was consulted and cured the disease by anticipating the paroxysm, as we do in the treatment of ague and administering sulphate of quinine in large doses, at short intervals of time.

Mr. Annesley states, in his book on *the Diseases of India,* that although the bark is the grand remedy in the fevers of India during the cold season, yet it fails *in the rainy season,* in which calomel and antimony only prove beneficial. This is a fact worthy of remembrance. Probably calomel and antimony given then at night and bark in the day, is the best practice.

SULPHATE OF ZINC OR WHITE VITRIOL

Sulphate of zinc, called formerly white vitriol, is tonic and astringent. It is sometimes very useful in *indigestion, whites,* old *chronic cough, hooping-cough* and *pulmonary consumption,* as it stimulates the digestive functions, strengthens the pulmonary organs and whole system and represses inordinate secretions from these and other parts. As a tonic, it is less heating and stimulant than preparations of iron and hence is often preferable in consumption, hooping-cough, indigestion and other diseases attended with great irritability and general weakness. In indigestion, it may be advantageously combined *with some* bitter extract, as extract of gentian, etc., in whites, chronic cough, asthma and pulmonary consumption, with gum myrrh, or hemlock; and in hooping-cough, with extract of gentian or hemlock. When combined with opium, it is of great service in removing the weakness and frequent motions, unaccompanied with pain, that take place in the protracted stages of dysentery and diarrhoea. As a tonic, the dose is from half a grain to a grain and a half, thrice a day.

In large doses, of from fifteen to twenty-five grains, it operates *instantaneously* as an emetic and offers, therefore, a prompt

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resource in case of poison, or where an immediate discharge from the stomach is required.

As an external application, this salt dissolved in rose-water, in the proportion of ten grains to half a pint of rose-water, forms an excellent collyrium in the latter stage of ophthalmia, after the inflammatory action has subsided. About sixteen grains dissolved in half a pint of water, is a useful injection for the whites; and if twenty grains be dissolved in the same quantity of rose-water, it forms one of the best lotions that can be used to scrophulous tumours, after they have suppurated and the abscess has been discharged.

SULPHUR

Sulphur is found native in the neighbourhood of volcanoes and is imported into this country chiefly from Sicily and Naples.

The sublimed sulphur, commonly called the flowers of sulphur, is laxative and diaphoretic, acting in a very mild manner, principally on the large intestines and at the same time determining to the surface of the body. In consequence of the mildness of its operation as a laxative, it is one of the best remedies for *piles,* a disease which generally arises from weakness and irritation of the bowels, of such a description as is always touch increased by costiveness, but will not allow of the use of active purgatives. In this complaint, it is best given in conjunction with a little lenitive electuary and cream of tartar.

Its alterative and diaphoretic effects render it serviceable in *chronic rheumatism* and *cough,* in *atonic gout, cutaneous eruptions, rickets, asthma* and other *pulmonary affections* not attended with acute inflammation; and it is probable, that its beneficial operation in these complaints is, in some measure, owing to its laxative effects. Its power of curing itch is universally admitted.

Precipitated sulphur, or the milk of sulphur, is whiter than the flowers of sulphur and is procured by receiving the vapours of common sulphur into a vessel filled with steam.

The ordinary dose is one or two drachms taken in milk. An

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electuary, made by mixing together three drachms of sulphur, one drachm of cream of tartar and four drachms of lenitive electuary, is a very useful form for administering this substance and adapted to all the cases to which the remedy is applicable, in the dose of a tea-spoonful, once or twice a day.

SULPHURIC ACID

This is the oil of vitriol and vitriolic acid of commerce and is usually prepared by the combustion of sulphur.

It is always employed medicinally under the form of the diluted sulphuric acid, which is made by mixing a fluid ounce and a half of the strong acid with fourteen fluid ounces and a half of distilled water. The usual dose of this diluted acid is from twenty to forty drops, twice or thrice a day, in a wine-glassful of water. As it is injurious to the teeth, it should be sucked through a quill. It is tonic, antiseptic and refrigerant and is found of great service in *haemorrhages, indigestion, diabetes, cutaneous eruptions* and in *typhus* or *typhoid fever.* It is also a grateful and useful medicine to restrain the colliquative sweats which attend hectic fever. In the first-mentioned cases, the diluted acid is generally combined with infusion of bark, gentian or other bitters. It covers the taste of bark and causes it to sit easier on the stomach than when given alone. *See Elixir* of *Vitriol.*

SWEET SPIRIT OF NITRE

This medicine is a pleasant refrigerant and diuretic and is used with much advantage in all *febrile affections,* to allay heat and quench thirst and in dropsy as an adjunct to other diuretic remedies. Its operation is greatly increased by dilation with water, or some other aqueous vehicle. In fevers, thirty or forty drops of it may be given every three hours, united with two drachms of the solution of acetate of ammonia and an ounce and a half of water. In dropsy it may be administered to the extent of a drachm at a dose, combined with other and more powerful diuretics.

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It appears that when added in a small proportion to malt spirits, it communicates to them a flavour resembling that of French brandy.

TAR WATER

Tar water is made by pouring a gallon of water on two pints of the best Norway tar, which is to be stirred with a wooden rod for a quarter of an hour; then, after the tar has subsided, the liquor should be strained and preserved in well corked bottles for use.

It is stimulant and alterative; and, when its operation is aided by bodily exercise, will frequently prove diuretic. It is certainly useful in some cases of *indigestion, scurvy, cutaneous eruptions* and other *chronic diseases*. The celebrated Dr. Cullen, of Edinburgh, thought highly of it and states that he has found it to strengthen the tone of the stomach, to excite appetite, promote digestion and cure all the symptoms of indigestion. Berkeley, the excellent and learned Bishop of Cloyne, through whose strong recommendation the drinking of this water was once so much in vogue, says, "When right, it is not paler than French, nor deeper coloured than Spanish white wine and full as clear and that if there be not a spirit very sensibly perceived in drinking it, you may conclude the water is not good. It may be drank cold or warm. As to the quantity, in common chronical indispositions, a pint a day may suffice, taken on an empty stomach, at two or four times, *viz.* night and morning and about two hours after dinner or breakfast; more may be taken by stronger stomachs. But those who labour under great and inveterate maladies, must drink a greater quantity, at least a quart every twenty-four hours. In acute cases, for example, fevers of all kinds, it must be drank in bed warm and in great quantity, perhaps a pint every hour, which I have known to work surprising cures".

We must not, however, forget that the *surprising cures* of former days would not appear such to us now, but many of our present cures would have been, indeed, surprising cures to our forefathers—and I have not so much faith in the efficacy of tar water as the Bishop of Cloyne had.

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THORN APPLE

The officinal name of this article is *stromonium.* The plant is a native of America, but is now common in this country. It is stimulant, powerfully narcotic and in over-doses poisonous. It was first recommended as a powerful remedy in *insanity;* but its virtues in this disease are not considerable. It is occasionally of great service in quieting the mind and procuring rest in violent paroxysms of *insanity,* but beyond this seems rarely of much advantage. It has lately been considered almost specific in severe chronic pains of the head, or other parts of the body; but it is with this as with other very energetic substances, what does one person much good, may be either hurtful or of no service to another. This very active substance requires to be exhibited with caution. It is given either in the form of tincture or extract of the former, the dose is ten or twelve, or even twenty minims or drops, twice a day, in water; of the latter, one quarter or half a grain, which may be gradually increased to three or four grains or more, in the twenty-four hours.

Smoking the herb in the manner of tobacco sometimes affords relief in the paroxysm of *spasmodic asthma* and has lately become a common practice; but it produces violent effects on some persons. It has, from time immemorial, been smoked in Ceylon to relieve asthma and the poorer Turks use it instead of opium.[1]

TORMENTIAL ROOT

This is a mild yet powerful astringent, of great service in *looseness* and *dysentery.* It is mild because it operates without producing

1. The following are judicious remarks respecting the probable operation of the stramonium in smoking it—"It seems to act in two ways: in the first place, it is applied to the mucous membrane in a state of great irritability and, by operating as a sedative and allaying this state, it permits the secretion of the mucous follicles to be effected more slowly and perfectly : so that the mucus, being formed in a more natural state, is easily separated and excreted. In the second place, by influencing generally the nervous system, the spasmodic symptoms attendant on the paroxysm of asthma are allayed and respiration proceeds in a calm and undisturbed manner".—Thomson's *Elements of Materia Medica,* vol. ii. p. 155.

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any stimulant effect and is, therefore, well adapted to check the diarrhea attendant upon pulmonary consumption and in other cases of that complaint where the general excitement is considerable. For this purpose, its union with small doses of ipecacuanha powder forms a very eligible medicine, which was highly spoken of by that distinguished physician Dr. George Fordyce.

It is also beneficial in old ulcers and in those cases of weak bowels where the patient is liable to frequent relaxations, although they may be of short duration.

Its astringency is so powerful, that it has been substituted for oak bark in the tanning of skims for leather.

It may be given in the form of a strong decoction, made by boiling one ounce of the bruised root in a pint of water, of which the dose is from one to two ounces, twice or thrice daily. It is likewise given in substance, the dose of the powder being from half a drachm to a drachm, in dill or simple water, which may be repeated twice or thrice daily, or oftener.[1]

TURPENTINE

There are several varieties of turpentine, but the Venice and Canada turpentine and the oil of turpentine, are those which are chiefly employed internally in the cure of disease. They are all stimulant, diuretic and cathartic. All turpentines seem to derive their virtues from the oil they contain. If the dose be small, they act chiefly on the kidneys; but when large, some degree of nausea is excited,

1. I witnessed once most extraordinary cures performed by this root. A poor man, fond of botanical excursions, either by tradition or accident knew the powers of this root; and by making a strong decoction of it, sweetened with honey, he cured agues which had resisted the bark, long-standing diarrheas, ulcers of the legs turned out of hospitals as incurable, the worst scorbutic ulcers, fluxes, etc., so as to excite the attention of Lord William Russell, who allowed him a piece of ground out of his park to cultivate his plant, which he kept as a secret; and in fluxes of blood I have found a drachm, given four times a day, in an infusion of hops, do wonders. The danger of suddenly checking discharges should be guarded against, of which this old man knew nothing; and occasional purges should be used, or an issue made in the thigh"—Dr. Thornton's *Family Herbal,* p. 504.

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with slight giddiness and soon a copious discharge from the bowels. In moderate doses, they produce a sensation of warmth in the stomach, raise the pulse and impart additional excitement to the whole vascular system. They are sometimes beneficially employed in *gleet, whites, habitual coughs a*nd mucous discharges from the urinary passages. Formerly, it was no uncommon practice to give them as a remedy for pulmonary consumption; but in that complaint their heating and irritating qualities never fail to render them injurious. In *old chronic coughs* they are often beneficial. The oil is justly regarded as a useful remedy in *lumbago*; *sciatica a*nd other varieties of *chronic rheumatism,* in which complaints its efficacy seems to be often increased by the addition of Peruvian bark. It is likewise of great service in some cases of epilepsy, especially when originating from worms; in infantile convulsions, arising from a disordered state of the stomach and bowels; and in tape worm.

For internal use, the dose of Venice or Canada turpentine is from ten grains to a drachm, made into pills with powdered liquorice root and repeated three or four times a day. As a diuretic, or stimulant, the oil of turpentine may be taken in doses of from twenty drops to a drachm, thrice daily. By means of a little yolk of egg and mucilage of gum arabic, it may be uniformly mixed with water. When taken to expel the tape-worm, the quantity must be from three to four drachms or more, repeated every eight hours till the worm is ejected. In these large doses, it is more easily taken when exhibited merely floating upon water, with the addition of a drop or two of oil of cinnamon or anniseed. If it does not operate by stool in four or five hours after it has been taken, a dose of castor oil should be exhibited.

Applied externally, the turpentines increase the tone of the part, counteract indolence of action and cleanse ill-conditioned ulcers. As local stimulants, they have been efficaciously exhibited in the form of injection, in cases of colic, obstinate costiveness and the small thread-worm. The oil is the most useful in such instances. It proves also an excellent addition to stimulating embrocations in chilblains, indolent swellings, palsy, etc.

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VALERIAN

Valerian root is antispasmodic and tonic; and is sometimes highly beneficial in those diseases which appear to be connected with a morbid susceptibility of the nervous system, as in *hysterics,* pain of one side of the head and in some species of epilepsy. It is of service in some instances of *hypochondriasis,* or low spirit and it may (in powder) often be advantageously combined with Peruvian bark; but its very nauseous taste is a great obstacle to its frequent employment. Dr. Cullen thought highly of it as a remedy for nervous disorders and lie remarks, that it should be given in large doses. It is best given in substance, united with a small portion of mace or cinnamon, which in some degree disguises the flavour. The dose is from a scruple to a drachm, given three or four times a day.

The ammoniated tincture of valerian is an elegant and efficacious cordial and antispasmodic, of great benefit to the nervous and low-spirited. The dose is from one to two or three tea-spoonfuls, with a tea-spoonful of tincture of cinnamon, thrice a day, in water; but it should not be given in any bitter infusion.

VERATRIA

This is the poisonous principle found in colchicum and other plants. It is a white, very acrid, inodorous substance, scarcely soluble in water and not very soluble even in boiling water. It is quite soluble in alcohol, ether and the vegetable acids. It is little used in medical practice; but from having sometime since been highly extolled by certain persons for its curative powers, as an external remedy, it is necessary to notice it here. It is employed only externally and chiefly in the relief of rheumatic and other chronic pains, rubbed into the parts in the form of an ointment, being mixed with hog's-lard. From ten to twenty grains of *veratria* mixed with an ounce of hog'slard is the safe proportion,—about the size of a large nutmeg being rubbed into the part night and morning. The proof of its taking effect is the sensation of sharp pricking which is usually felt on the part subject to its operation. After it has been used for three or four days, it will sometimes occasion sickness and

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vomiting. I have known it of great service in rheumatism and sciatica.

But my readers must be very cautious in the use of all remedies of this class. They are *poisonous* and should be used only under the superintendence of an able professional man. I do not believe the glowing reports of the marvellous powers of this medicine which have been published. Interested medical adventurers swarm throughout the land and especially in London and my readers should be upon their guard.

VINEGAR

Vinegar is a weak vegetable acid, produced by exciting the acetous fermentation in substances which have undergone, or are susceptible of the vinous fermentation. Sugar and water, the saccharine vegetable juices, infusions of malt, malt liquors, cyder and wine, may be converted into vinegar, by adding to them yeast, or any other ferment and exposing them in vessels to which the air has access, in a temperature between seventy-five and ninety degrees.

Distilled vinegar is sometimes employed as a cooling medicine in fevers, being added to any common diluting drink. When taken into the stomach it is cooling, promotes a gentle breathing perspiration and the discharge of urine. It allays thirst and diminishes excessive heat. In inflammatory fevers, it may be used to acidulate barley-water, or any other ordinary beverage of the patient. It is also an efficacious remedy for the scurvy and one of the best means of counteracting the fatal effects of over-doses of opium, hemlock and other narcotic poisons. For this last purpose, it should be administered in doses of a table-spoonful, frequently repeated, after the stomach has been freely emptied by a proper emetic.

Diluted with water and applied externally as a lotion, it is sometimes of much service in burns, bruises, sprains and chronic inflammation of the eye and for clearing the eye of small particles of lime, when they adhere to any part of the ball, or the lids. Its

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odour is grateful when it is sprinkled on the floor of the chamber of the sick in malignant fevers, though it has little efficacy as a fumigation.

WATER

Common water is an agent of great importance in the prevention, relief and cure of diseases; and it is, therefore, necessary that its qualities and effects should be made known in the present work.

Water retains its fluidity under the ordinary pressure of the atmosphere, at any degree of temperature between thirty-two and two hundred and twelve degrees of Fahrenheit's thermometer; but under thirty-two degrees it crystallizes and becomes solid, or is changed into ice; and above two hundred and twelve degrees assumes an aëriform character, or becomes steam, expanding to 1698 times its ordinary bulk.

Although water is almost universally diffused over the surface of the earth, it never occurs in a state of absolute purity, which is owing to its extensive powers as a solvent. It is generally found holding earthy matter in a state of mechanical suspension, or saline and other bodies in chemical solution, but the nature and degree of its contamination must necessarily vary according to circumstances and situation. These impregnations, however, are not sufficient in general to give it any very sensible taste or odour, or to render it unfit for the ordinary purposes of life. All the varieties of common water may be arranged under the three following heads :

1. Rain Water.
2. Spring Water.
3. River Water.

Rain Water, when collected in the open fields, is certainly the purest natural water and consequently of the least specific gravity; but when collected in towns, or from the roofs of houses, it contains a small portion of sulphate of lime, soot and other impurities and

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requires to be boiled and strained previous to internal use. Hippocrates gave this advice and the precaution has been strongly advised by modern chemists and physicians of eminence.

Snow water, when newly melted, is destitute of air, which is the reason that fish cannot live in it; but when allowed to remain for some time exposed to the atmosphere, it does not differ in its qualities from rain water.

Spring Water, in addition to the substances detected in rain water, generally contains a small portion of common salt and frequently other salts. The larger springs are purer than smaller ones and those which occur in siliceous rocks, or beds of gravel, contain the least impregnation. If it has not filtered through a very soluble soil, it is often almost as pure as rain water.

Well or pump water, which is spring water obtained by digging to a considerable depth, is by no means so pure. It is commonly distinguished by a property named hardness, implying an incapability of dissolving soap; which is owing to its containing many earthy salts, the principal of which is sulphate of lime. *Soft Water* is a more powerful solvent of all vegetable matters than hard water and is consequently to be preferred for domestic as well as for medicinal purposes; the brewer knows well from experience, how much more readily and copiously soft water will dissolve the extractive matter of his malt. The great superiority in point of wholesomeness which soft water has over that which is hard, is proved by many striking facts. Horses, by an instinctive sagacity, always prefer the former and when, by necessity or inattention, they are confined to the latter, their coats become rough and ill-conditioned and they are frequently attacked with the gripes. Hard water has a tendency to produce disease in the spleen of certain animals, especially sheep; and pigeons refuse it when they have been accustomed to that which is soft. Some very eminent and discerning physicians have ascribed the scrophulous swellings and complaints of gravel, so common in certain districts, to the hardness of the water there and there is often much to countenance the opinion. The best mode of freeing hard water of its earthy salts, is first to boil it; then, after it has cooled, to drop into it an alkaline carbonate, or a little carbonate of soda, etc., and lastly, to filter it.

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Probably the purest *spring water* in this kingdom is found at St. Winifred's Well, at Holywell, in Flintshire; at Bridgend, Glamorganshire; at Malvern and at Matlock; at least, these are well known as very pure waters. All these have acquired much celebrity in the cure of affections of the skin, kidneys and bladder, owing no doubt to the diluting and diuretic effects resulting from their greater purity.

River Water, when the stream is rapid and runs over a pebbly or siliceous channel, is as pure as the softer spring water; but when the current is slow and the bed clayey, it approaches nearer, to the nature of well water and frequently contains putrified vegetable and animal matter, as is generally the case in the water of lakes and marshes.

The medicinal properties of water as a diluent are considerable and were well known to the ancients; and cold water used as a drink in fevers, was the principal remedy of Hippocrates, the father of physic, in these complaints.[1] The temperature of sixty degrees is the proper degree where it is intended that water should produce its diluent effects without the aid of heat. Under forty-five degrees it produces a sedative and astringent effect; above sixty degrees and under a hundred, it relaxes the fibres of the stomach and is apt to induce nausea; but at a higher temperature, the stimulus of heat prevents that effect. Simple water may supersede the use of all other diluents; but animal and vegetable infusions are generally employed, or toast and water, which is more agreeable to most palates and is an excellent diluent in fevers and inflammatory diseases. The temperature of water as a diluent should be regulated by the nature of the disease; in internal bleedings, tile temperature should not exceed forty-five degrees, but it may be sixty degrees

1. A physician now "leaves the quantity to be regulated, in a degree, by the desires of the patient. This is undoubtedly the best guide; and it has been remarked by every writer on diseases, that, in acute fevers, the desire for watery fluids is so striking as to be almost a measure of the degree of fever which rages. As simple water contains nothing in itself noxious, the attention of the physician is required to be directed only to quantity and temperature. And with regard to both these circumstances, the measure of both may, in truth, be left to the desires of the patient".—(Thomson's *Elem. of Mat. Med.* vol. ii. p. 671.)—He means in ordinary cases.

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in fevers; unless in the cold stage of the paroxysm of fever, when thirst should be allayed by tepid or warm water, or other bland fluids; and the same precaution is necessary when the sweat has become general and profuse. In cases in which there exists a morbid increase of bile, or of the secretions of the stomach and bowels, disturbing the functions of these organs, the temperature of the water used as drink may be from ninety to one hundred and fourteen degrees; and in some cases of indigestion, which are attended with the sensation of coldness at the stomach and with cold extremities, a cupful of water, taken hot, affords very considerable relief. Some medicines, as sudorifics, diuretics, emetics and refrigerants, scarcely produce their effects, unless their operation be assisted by copious dilutions with water or watery fluids.

Distilled water is transparent, colourless, wholly void of taste and smell, lighter than any other water and feels softer to the touch when the fingers are wetted with it,—the purest is obtained from rain water once distilled. It possesses powerful solvent properties, in respect both to animal and vegetable matter and is capable of pervading the minutest vessels of the body; hence it is of great value as a diluent in most chronic disorders, more especially in urinary, scrophulous and cutaneous affections. In some cases of such diseases, especially when combined with a spare animal, or a vegetable diet, it has proved of uncommon service. Some curious facts relating to the subject may be found in Dr. Lambe's publications *on the Cure of Constitutional Diseases.*

WILD CUCUMBER

The expressed juice of the fruit of this plant deposits a fecula, which, when dried, has been known by the name of *Elaterium.* It is a very powerful cathartic and is supposed by some physicians, to be the best hydragogue purgative we possess. It is frequently employed in *dropsies,* when purgatives are admissible and other milder remedies fail in evacuating the water; and it appears that ancient, as well as modern, physicians administered it with much confidence and success. Dr. Ferriar, of Manchester, is said to have found it an efcacious remedy for dropsy of the chest. But it is often very violent

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in its action and requires to be given with caution, more especially in elderly or debilitated subjects. Its dose is a quarter of a grain, made into a pill and repeated every second or third hour, until it *begins* to operate, when no more should be given until the extent of its operation is ascertained. It is frequently advisable to unite the half grain of elaterium with the same quantity of calomel. The late Dr. Alexander Buchan has observed, that he has known this combination evacuate gallons of water, in numerous instances of dropsy. The patient must always be supported with strong beef tea and bread, etc. during its operation.

WILD CHERRY BARK

This is a large and handsome tree indigenous to the United States. The bark of the tree *(Prunus Virginiana)* is tonic, expectorant and sedative and is employed by American physicians in the cure of ague, dyspepsia and consumption. It is said to leave considerable effect in controlling an inordinate action of the heart and arteries. Infusion is the best mode of taking it. An ounce of this bark should be infused in a pint of cold water for twenty hours, of which the dose is a wine-glassful, every four or six hours. It is said to relieve more effectually than any other remedy that peculiar sense of sinking in the pit of the stomach, complained of by the consumptive. The bark is supposed to owe its virtues chiefly to a small portion of prussic acid which it contains.

WILLOW BARK

The bark of the common willow is tonic and alterative and is useful in ague, indigestion and some chronic eruptions on the skin. In fact, it may be efficaciously employed in all the complaints for which Peruvian bark or quinine, is ordinarily administered. The *dose* of the powder is from half a drachm to a drachm, twice a day, in water. The *decoction is* an eligible mode of taking it, made by simmering together for half an hour one ounce of the bark in a pint of water, of which the dose is from two to four table-spoonfuls twice a day.

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Salicine is the crystalline active principle obtained from willow bark and is a mild bitter tonic, similar to quinine. Should quinine irritate the stomach, probably salicine would not do so. The *dose* is from ten to twenty grains, in a wine-glassful of infusion of orange peel, twice a day.

WINE

The term wine is more strictly and specially applied to express the fermented juice of the *grape,* although it is generally used to denote that of *any* sub-acid fruit. The presence of tartar, is, perhaps, the circumstance by which the grape is most strongly distinguished from all the other sub-acid fruits, that have been applied to the purpose of wine making. The juice of the grape, moreover, contains within itself all the principles essential to vinification, in such a proportion and state of balance, as to enable it at once to undergo a regular and complete fermentation, whereas the juices of other fruits require artificial additions for this purpose; and the scientific application and due adjustment of these means, constitute the art of making wines. It has been remarked, that all those wines that contain an excess of malic acid are of a bad quality, hence the grand defect that is necessarily inherent in the wines of this country and which leads them to partake of the properties of cider; for in the place of *tartaric,* the *malic* acid always predominates in our native fruits.

Various circumstances, such as climate, soil and the mode of conducting the fermentation, modify the flavour and taste of wine. Wines may be arranged into four classes, *viz.,* (1) *Sweet Wines,* as Malaga, Frontignac, Tokay, Vino Tinto, Montefiascore, Schiras and the Malmsey wines of the Greek islands, (2) *Sparkling or Effervescine Wines,* as Champagne, Gooseberry, etc., (3) *Dry and Light Wines,* as Hock, Rhenish, Mayne, Moselle, Barsac, Burgundy, Claret and Hermitage; and (4) *Dry and Strong Wines,* as Marsala, Madeira, Port and Sherry. But notwithstanding these differences, the essential components of all wines are the following: one or more *acids,* especially the malic and tartaric; *extractive matter,* which in old wines is deposited with the tartar; *a volatile oil,* on

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which the flavour depends; *colouring matter* and *alcohol, or spirit of wine,* the most important of their ingredients and that one on which their dietetic and medical properties depend.

Wine, when good and of a proper age, is cordial and tonic; but when new, it is flatulent, debilitating and purgative and intoxicates sooner than old wine. In a dietetical point of view, the temperate use of it promotes digestion and gives additional energy to the action of the heart and arteries, strengthens the animal functions, exhilarates the spirits, sharpens the wit and calls into action all the intellectual powers; but when taken in excess, it intoxicates, producing sickness, head-ache giddiness and looseness, with nervous tremors, which continue for two or three days; and, like ardent spirits, its habitual excessive use, extinguishes the faculties of both body and mind, producing indigestion, emaciation and debility, inflammation of the lungs and liver, palsy, gout, dropsy and a long train of diseases and wretchedness. In almost all cases of indigestion, bilious complaints and other disorders in which there exists great weakness of the stomach, the white wines will be found preferable to the red; they sit easier on the stomach and do not tend to confine the bowels as the latter do, which are material points, worthy of much attention. For the use of wine as an article of *Diet,* see that head.

As a remedy, wine is stimulant, tonic and antispasmodic. Its chief medicinal application is in the treatment of fevers of a malignant type, to support the strength of the system in the advanced stages and to obviate the symptoms arising from debility. With these views, it is given sometimes with more advantage than any other tonic,—a superiority derived from its stimulating power being obtained with more certainty and being more easily regulated by due administration, from its being more grateful and probably not requiring to be assimilated by the digestive organs to produce its effects. The quantity in which it is given, is dependent on the state of the disease; the object to be obtained, is that of supporting the strength of the system, until the fever has run its course; the danger to be avoided, is that of giving it so largely as to occasion any degree of exhaustion. The administration is regulated, therefore, by the effects it produces; advantage being always derived from it,

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when it renders the pulse more slow and firm; when the recurrence of delirium is prevented; when irritation is lessened and sleep induced. If the pulse be quickened and the countenance become flushed; if it excite thirst, increase the heat of the body and occasion restlessness or delirium, it is obviously injurious and the dose must either be diminished, or its use suspended. In typhus, the proper rule is to give it till the pulse fills, the delirium abates and the extremities warm; and it should be repeated on the smallest appearance of stupor, quick and sinking pulse or tremor. A few glasses, given in the space of twenty-four hours, will often produce all that is required from wine; but sometimes very large quantities are necessary. In malignant sore throat, a woman, unaccustomed to the use of wine, has taken three bottles of Madeira every day for some time, with marked advantage.

In extensive ulceration or gangrene, wine is not only the best addition to Peruvian bark and ammonia, but is a remedy on which alone there is much reliance; and in the convalescencies from all severe diseases, it is an efficacious means of restoring the exhausted strength and vigour.

When wine is prescribed as a cordial in a state of recovery from any acute disease, or in a weakened state of the habit, it should not be taken with dinner or any other meal, but at noon, on an empty stomach. In such a case, it is an excellent practice to get a crust of good bread, dip it piece by piece, into a glass of very old rich wine, as Canary, Tent, Madeira, Sherry or Port and take it every day about twelve; it is a valuable cordial. Sometimes in convalescence from a severe disease, the nerves are so irritable as to produce a feverishness in the system on the application of stimulants, when the quantity of wine used must be small and Claret, Moselle or Hock, will be found the best sort.

I ought not to dismiss this article without observing, that the adulteration of wines is a frequent practice among wine merchants and one which is fraught with much mischief; for so iniquitous are the means made use of by some dealers, to enable them to pass bad wine off as that which is good, that such adulterated wines often operate like slow poisons. They occasion head-ache, pain of the

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stomach, uneasiness, cough and difficulty of breathing and afterwards colic, constipation, palsy and consumption. Some of the adulterations of wine are rather harmless, others extremely dangerous. The common red wines are frequently made of new, tart and half-spoiled white wines, by tinging them with red sumach, or other woods or berries. In order to make the wine stronger and more pungent, a variety of spices are employed, such as galangal, cardamom, mace and the like; or an unfermented mash, wort, or the mash for distilling spirits, are occasionally added and allowed to ferment together with inferior wines. But the most deleterious of all adulterations of wine, is that with sugar of lead and other preparations of that mineral. This infamous practice was carried on, some years ago, in Paris to such an extent, that the Excise Office could not account for the prodigious increase of vinegar, entered at the city gates. But it was at length discovered, that this vinegar consisted only of tart and adulterated wines, imported under the pretended character of vinegar, in order to avoid the high duty imposed upon wines, on their entrance into Paris; and sugar of lead, joined to some absorbent earth, was employed to change these vinegars into sweet wines, which destroyed the lives of many thousand persons. This secret of the utmost importance to health and life, was confessed by a rich old wine merchant, on his death bed, to relieve in some degree his tortured conscience.

To detect adulterated wines, we must attend to the following particulars: every white or straw-coloured wine, of a sweetish taste, afterwards astringent and at the same time new; every wine that has an unusually high colour, not in proportion to its strength. and age, or the flavour of brandy, penetrating the tongue; or lastly, an uncommon strong flavour, may be justly suspected of adulteration. Red wines, either of a very deep or of a very faint colour ; of a woody or tart taste; and those which cover the inside of the glass as well as the bottom of the bottles, with a red sediment, are generally tinged with some colouring substances.

In order to discover whether suspected wine contains any metallic adulteration, we are possessed of an excellent chemical test, discovered by Professor Hahnemann of Germany and known

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by the name of *Liquor Vini Probatorius*. It is prepared as follows: one drachm of the dry liver of sulphur and two drachms of cream of tartar, are shaken together in two ounces of distilled water, till it be completely saturated with hepatic gas; the liquor is then filtered through blotting paper and kept in a closely-stopped phial. From sixteen to twenty drops of this liquid are dropped into a small glass, filled with wine that is suspected to have been adulterated. If the wine turn only thick with white clouds and deposit only a white sediment, we may be certain that it contains no metallic ingredients whatever; but if it turn black, or even muddy, if its colour approach to that of a dark red, if it have first a sweet and then an astringent taste, it is certainly impregnated with sugar of lead, or some other impregnation of that metal, equally destructive. If, however, the dark colour be of a blue cast, not unlike that of pale ink, we may suspect the wine to contain iron in its composition. Lastly, if the wine be impregnated with copper or verdigris, it will deposit a sediment of a blackish grey colour. This experiment ought to be made with a fresh-prepared test and in the open air.

COMMON WINTER CHERRY

This is a perennial plant, common in our shrubberies. Boerhaave asserts that it is useful in fevers and disorders of the kidneys and some medical men of the present day say that it is of great service in gout and much safer than colchicum. Of the last opinion there can be no doubt. The *dose* is from six to twelve of the berries, or half an ounce or more of their expressed juice, twice a day. Or from half a tea-spoonful to a tea-spoonful of the tincture may be taken, thrice a day, in water.

WORMWOOD

Wormwood is a bitter tonic, of considerable service in indigestion and low spirits; and it has also been used with advantage in ague, gout and scurvy. Reports have been recently circulated of its having been found of great service in epilepsy. Notwithstanding, it is now seldom employed by British practitioners in these complaints. Its

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powers in expelling worms are well ascertained and have bestowed upon it the name of *wormwood*. It will frequently bring away the smaller sorts of worms in great quantities. The dose in powder is from one to two scruples, twice or thrice a day. The infusion is made by pouring a pint of boiling water on an ounce of the plant, of which from an ounce to an ounce and a half may be taken twice or thrice in twenty-four hours.

Infused in ale it forms the beverage known by the name of *purl*.

ZINC

I have noticed the *oxyde and sulphate of zinc* at pages 96 and 118. Three preparations of zinc remain to be noticed, namely, *the valerianate of zinc, the acetate and chloride.*

The *valerianate of zinc* is used internally as a tonic antispasmodic, of great service in neuralgic complaints, depending on a loss of tone in the system. It is therefore, taken with advantage in neuralgic pains of the face and head and in St. Vitus's dance. The *dose* is a grain twice or thrice a day, made into a pill with a little extract of dandelion or gentian.

The *acetate of zinc* is rarely used internally, but as a *topical* remedy it is employed with very great effect, on account of its astringent qualities, in chronic inflammation of the eye, vagina and womb. It seems to be more successful than the sulphate of zinc. An injection composed of six grains of sulphate of zine and four ounces of the diluted solution of the sub-acetate of lead *(liquor plumbi sub-acetatis dilutus)* is an efficacious remedy in the advanced stage of whites.

The *chloride of zinc* is a powerful and valuable caustic. As such it penetrates deeper in its action than the nitrate of silver and besides corroding the parts to which it is applied, it exercises an influence over the vital actions of neighbouring parts; and it possesses this superiority over the arsenical caustics, that there is no danger of any constitutional disorder from its absorption. As an application to parts affected with malignant disease, such as cancer, or other intractable forms of local malady, it is of great value.

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COLLECTION
OF
APPROVED PRESCRIPTIONS
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MEDICINAL PREPARATIONS
Adapted to Family and Domestic use

BALSAMS

The subject of this section is not the natural balsams, but certain compositions, which, from their being supposed to possess balsamic qualities, generally go by that name. In strict medical language, however, only those compositions are called balsams which contain benzoic acid.

Friar's Balsam — No. 1

Is composed of benzoin, purified storax, balsam of tolu, socotorine aloes and rectified spirit of wine.

It is sometimes very useful in *old coughs* and *asthamas,* as it stimulates the stomach and pulmonary organs and thus increases the tone of those parts and promotes expectoration. But it is not proper in recent coughs. It is an excellent application to languid ulcers, which require stimulating. The dose is from twenty to sixty drops, twice or thrice a day, on sugar or rubbed with mucilage.

It has been celebrated under the name of *Commander's Balsam, Jesuits Drops, Wade's Drops, Turlington's Balsam,* etc.; and is sold at all druggists' shops under the name of Compound Tincture of Benjamin.

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Balsam of Honey **No 2.**

Take of Balsam of tolu 1ounce;
Gum storax 1drachm;
Purified opium 15grains;
Best honey 4ounces;
Rectified spirit of wine ..... 1pint.
Let them digest together for five or six days and strain.

This is a pectoral balsam, serviceable in *coughs* and *colds*, in doses of one, two, or three tea-spoonfuls occasionally, when no fever is present. It is most applicable to habitual coughs. It is the same medicine as is puffed off under the title of *Sir John Hill's Balsam of Honey.*

CATAPLASMS OR POULTICES

Cataplasms, or poultices, are frequently made too thin, by which means the least pressure or their own gravity, remove them from the part; they should always be thick enough to support a certain form when applied.

The best way of making a common bread poultice, is to scald out a basin, then to put into it a sufficient quantity of bread crumb and cover it with boiling water and after the bread flax absorbed as much of the water as it will contain, the remainder should be poured off, when the poultice is fit for use.

Yeast Cataplasm **No. 3**

Take of Flour ..... 1 pound;
Yeast of beer ..... half a pint.

Mix and expose the mixture to a gentle heat, until it begins to swell, when it is fit for use.

This cataplasm is of excellent use when applied to painful, foul or gangrenous ulcers. It affords a gentle yet valuable stimulus to such ulcerations, correcting any existing tendency to morti-

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fication, cleansing the wound and removing the factor of the discharge.

Mustard Poultice **No. 4**

Take of Mustard seed, in powder ..... half a pound;
Linseed, in powder ..... half a pound;
Hot vinegar..... a sufficient
..... quantity.
Mix them to the thickness of a poultice and they are fit for use.

It is a powerful local stimulant and rubeficient, of great service in obviating a determination to the head in the low stage of typhus or remittent fever, particularly when stupor or delirium is present and in apoplexy and many other cases. It is spread on cloth to the thickness of about half an inch and when applied to the soles of the feet, its rubefacient effects are very quickly produced and often so powerfully as to raise blisters on the part. It is rendered still more decidedly stimulant by the addition of one or two table-spoonfuls of oil of turpentine.

Charcoal Cataplasm **No. 5**

Take of Linseed meal ..... half a pound;
Charcoal powder ..... 2 ounces;
Hot water, a sufficient quantity to make a poultice.

This is a useful antiseptic cataplasm, which has the power of cleansing foul ulcers and correcting a tendency to mortification and is applicable to all cases in which these objects are to be fulfilled.

Goulard's Poultice **No. 6**

Take of Extract of lead, (the liquor plumbi acetatis of the shops)..... 1½drachm;
Rectified spirit of wine 2ounces;
Common water 12ounces;

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Crumb of bread, a sufficient quantity to make the whole into a proper consistence.

It is beneficially applied to inflamed surfaces, to allay irritation and reduce inflammation and swelling in any part of the body.

Hemlock Cataplasm **No. 7**

Pour 2 pints of water on 2 ounces of hemlock leaves and boil it till only a pint remains, when as much linseed meal as necessary is to be added.

The hemlock poultice is an excellent application to many cancerous and scrophulous ulcers and other malignant sores; frequently producing a great diminution of the pain of such diseases and improving their appearance. The fresh herb bruised, when it can be obtained forms the best hemlock poultice.

French Poultice **No. 7A**

Take of Olive oil	4 ounces;
Pork fat, fresh butter, mutton suet, yellow wax and litharge, of each	2 ounces;
Black pitch	half an ounce.

Mix them together; warm them in a pipkin, then add a quarter of a pound of linseed-meal poultice, or more if necessary and apply the poultice warm.

This is the celebrated *onguent de la mere* of the French physicians and is an emollient poultice very useful in inflamed surfaces and in hastening suppuration.

N.B.—Of course, less than the quantity above specified may be used if the swelling is of such a size as to require less.

Suppurative Poultice **No. 7B**

Take of barley-meal and linseed-meal, of each a sufficient quantity,—say two or thee ounces; put it into

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a sufficient quantity of decoction of marsh-mallows and cook it to a suitable consistence, frequently stirring it.

This is an excellent emollient poultice, suited to inflamed parts. If it is desirable to hasten the suppuration of an abscess, then add one ounce and a half of basilicon or of *French Poultice,* No. 7A; or, instead of basilicon, two ounces of the pulp of the bulb of white lily may be added, which very decidedly hastens the suppuration of an abscess.

CLYSTERS OR ENEMAS

Purging Clyster — No. 8

Dissolve an ounce of Epsom salt in a pint of barley-water, or thin gruel, or lukewarm water and then add two ounces of olive oil or castor oil.

This is a useful purging clyster, of great service in all cases in which it is desirable to procure a speedy evacuation of the bowels.

One of the best, if not the very best, clyster or enema apparatus is *Twinberrow's, of No. 2, Edwards Street, Portman Square.* It seems to be at once the *most simple and perfect* yet produced.

The *piston* or *pump,* which so *frequently gets out of order*, is *not introduced* into this *apparatus;* there is therefore, an absence OF OILY OR GREASY MATTER AND BLACK LEAD, (which are absolutely necessary to lubricate the piston in the usual syringes), which soon become *rancid* and *green,* some portion of which inevitably *passes* with the fluid *injected* from an *ordinary syringe.*

One hand only is required to work this instrument and it is done *without any exertion.* No. *AIR can possibly Pass with the injection.*

From the description thus given, the *superiority* of this instrument is apparent. It requires no *adaptation of parts,* no *screwing* or *unscrewing of conduit pipes* or *tubes.* It is *extremely portable,* the conduit pipe moving on the hinge-joint allows it to fold back upon the reservoir; it is thus reduced to the smallest

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possible compass. In this way it can be taken to the closet and there used without the *least delay* or *annoyance.*

Anodyne Clyster **No. 9**

Add thirty, forty, or sixty drops of laudanum to three ounces of olive oil. Or add forty or sixty drops of laudanum to three ounces of thin starch, warm.

These clysters are particularly useful in cases in which there is great irritation about the rectum, bladder, or urinary passage; and in dysentery and diarrhoea, after the bowels have been cleared. They have great effect in relieving pain and diminishing spasm, in all the organs contained within the lower belly. Anodyne clysters are always administered in the small quantity now ordered.

Clyster for the Colic **No. 10**

Mix two drachms of assafoetida gum with a drachm and a half of sal volatile, half a drachm of laudanum and ten or twelve ounces of warm gruel, or barley water.

This clyster will frequently operate like a charm in the cure of flatulent colic and be of much service in other varieties of this complaint when unattended with inflammation.

COLLYRIA OR EYE-WATERS

Astringent Collyrium **No. 11**

Mix 10 drops of extract of lead, that is, the liquor plumbi acetatis of the shops and 2 drachms of distilled vinegar, with 4 ounces of distilled water.

This is a good application to inflamed eyes, especially when one of a gently astringent cooling quality is indicated.

Another **No. 12**

Dissolve 5 or 6 grains of sulphate, or of acetate of zinc, in 4 ounces of distilled or of rose water.

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This is the most common of all eye-waters, for the relief of inflammation of the eyes and in the advanced stages of this complaint it is often advantageously increased in strength.

Anodyne Collyrium **No. 13**

Take of Solution of acetate of ammonia ..... 2 ounces;
Distilled water, hot..... 6 ounces;
Soft extract of opium..... 10 grains.
Dissolve the soft extract of opium in the hot water, strain through fine linen and add the solution of acetate of ammonia.

In inflammation of the eye, where the pain and irritation are very considerable, this is often productive of great relief.

Soothing Collyrium **No. 14**

Take of Acetate of lead ..... 12 grains;
Wine of opium..... 1 drachm;
Distilled water ..... 6 ounces.
Mix them together.

This is another excellent application when there is much pain and swelling, or chronic inflammation in the eyes. I prescribe it with satisfactory effect on all ordinary occasions.

Collyrium for Specks on the Cornea **No. 15**

Dissolve half a grain of bi-chloride of mercury in 4 ounces of the best rose water.

This eye-water is of great service in removing the redness and indolent inflammation and the white specks, left after an acute inflammation of the eye—that is, when the inflamed state has become chronic.

DECOCTIONS

These are aqueous solutions of the active principles of vegetables,

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obtained by boiling. They-are intended to afford more powerful remedies than can be obtained by the simple infusion of the same substances in cold, or even in boiling water. For making decoctions, the substances to be employed must be divided, if in the dry state, by pulverization, or if fresh, by slicing, so as to expose an extended surface to the action of the water; which is thus enabled to take up their soluble principles in a shorter space of time, a circumstance of much importance in the preparation of decoctions. Decoctions should invariably be quickly made, because by long decoction in water, even in covered vessels, the constituents of many vegetable bodies are liable to re-act upon one another and produce entirely new compounds, possessed of properties different from those which they previously constituted. They should be strained while hot and prepared in small quantities only, as they are apt to ferment and spoil soon. In summer they ought seldom to be used after they have been made forty-eight hours.

Compound Decoction of Aloes **No. 16**

Take of Extract of liquorice..... half an ounce;
Carbonate of potash..... 2 scruples;
Extract of spiked aloes..... 1 drachm;
Powdered myrrh ..... 1 drachm;
Pondered saffron ..... 1 drachm;
Water ..... 1 pint.
Boil down to 12 fluid ounces and strain; then add of compound tincture of cardamoms, 4 fluid ounces.

This is a very mild purgative medicine, of great service in costiveness, bilious and nervous disorders, jaundice, low spirits, accompanied with constipation of the bowels and female irregularities connected with this state of the intestinal canal. The dose is from half an ounce to four ounces taken in the morning. In order to obtain its full effect in severe cases, it should be taken every other morning, for two or three months, in such a quantity as just to keep the bowels free, without being purged.

It is very similar to the celebrated *Beaume de Vie* and may be

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kept a much longer time than any other decoction without spoiling; indeed it is more efficacious after being kept a week than when fresh made.

Compound Decoction of Sarsaparilla **No. 17**

Take of Sarsaparilla root, sliced ..... 4 ounces;
Boiling water ..... 4 pints.

Macerate for four hours in a vessel lightly covered and placed near the fire; then take out the sarsaparila and bruise it. Return it again to the liquor and macerate in a similar manner for four hours more, first adding of raspings of guaiacum wood, bark of sassafras root, liquorice root, bruised, of each, an ounce ; bark of mezereon root, 3 drachms. Finally strain.

This decoction is a successful imitation of the once celebrated *Lisbon Diet-drink.* It operates as a diaphoretic and alterative and is often of the greatest service in the treatment of chronic rheu-matism, cutaneous eruptions, the advanced stages of indigestion and many very severe local diseases originating in disorder of the constitution. It is of eminent utility in the secondary forms of syphilis. If it agrees, it generally occasions a pleasant moisture in the mouth, cleans the tongue and promotes a lax state of the bowels. Should a gentle looseness come on during its employment, it must on no account be checked. It is commonly given in conjunction with some mild mercurial pill. The dose is a quarter of a pint, repeated three times a day, or half a pint twice a day.

The *alkaline infusion of sarsaparilla* proves sometimes a more powerful alterative and restorative than the preceding decoction. It appears to have more of a strengthening quality and to be generally more eligible than the latter, when the patient is troubled with much acidity and other symptoms of great weakness in the stomach. It is taken in the same doses as the decoction and is made in the following manner.

Take of sarsaparilla root, sliced and bruised, four or six ounces; liquorice root, sliced, an ounce; fresh made lime water, four pints. Let them digest together in a covered vessel for twelve hours, during which time they should be frequently stirred and shaken. After

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being strained it is fit for use. *See Sarsaparilla,* page 110. Still of all modes of taking sarsaparilla, the powder is the most efficacious.

Decoction of Bark **No. 18**

Take of Lance-leaved Peruvian bark, bruised . 1 ounce;
Water . . . . . 1 pint.
Boil for 10 minutes in a lightly covered vessel and strain the liquor while it is hot.

Peruvian bark in this form agrees better with most stomachs than when in powder; but its powers are necessarily diminished. It is given in all cases in which the bark in substance is useful. The dose is from two to five table-spoonfuls, twice a day.

Barley-Water **No. 19**

Take of Pearl barley . . . . . 2 ounces;
Water . . . . . 5 pints.
First wash away any extraneous substance that may adhere to the barley; then, having poured on it half a pint of water, boil for a few minutes. This water being thrown away, let the remainder be added boiling, then boil down to two pints and strain.

This is a simple decoction of barley, commonly called barley-water and is of much service in all fevers and other acute diseases attended with much thirst and irritation, in which it is taken as freely as the patient pleases. The following is a compound decoction of barley, which is a still more effectual demulcent in cases of pulmonary consumption, strangury, gravel and other diseases accompanied with fever.

Compound Barley-Water **No. 20**

Take of the above simple decoction of barley . 2 pints;
Figs, sliced . . . . . 2 ounces;
Liquoric root, sliced and bruised . . . . . half an ounce;

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Raisins, stoned ..... 2 ounces;
Water ..... 1 pint.
Boil down to two pints and strain.

Two or three tea-spoonfuls of syrup of poppies may be added to this decoction, to obviate its laxative effect, where this might prove hurtful; but, generally speaking, this effect will be an advantage rather than otherwise.

Astringent Decoction **No. 21**

Take of Oak bark ..... 1 ounce;
Water ..... 2 pints.
Boil down to a pint and strain.

This is a very astringent decoction, of considerable use in whites and the thin whitish discharge which often remains after miscarriage; and in piles and prolapsus of the anus. In the former cases, it is injected up the passage by means of a common syringe and in the latter, it is used as a lotion. It is also employed as a gargle in sore throat and relaxation of the uvula, in which complaints it may be either used alone, or three drachms of tincture of myrrh or capsicum may be added to every half pint of the decoction.

It is also an excellent internal medicine in the advanced stages of the snuffles in infants, to give tone to the vessels of the head and to the constitution at large.

DRAUGHTS

This is a proper form for exhibiting those liquid medicines in the dose of which it is necessary to be exact and such other remedies as are intended to operate immediately and do not need to be frequently repeated, as narcotics purges and vomits.

Anodyne and Sleeping Draught **No. 22**

Take of Bi-carbonate of potash ..... half a drachm;
Lemon juice, half an ounce, or citric acid .... 20 grains;

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Spearmint, or common water..... a wine-glassful;
Battley's solution of opium, or Laudanum, 20, 30 or 40 drops;
Syrup of tolut..... 1 drachm.[1]
Mix.

This is a very useful draught to procure sleep and ease pain, in the majority of diseases. I have already said, in noticing separately the different articles in the Domestic Materia Medica, that *Battley's Solution of Opium,* or the *Black Drop,* are far preferable to laudanum, or any of the common preparations of opium, for procuring sleep and alleviating pain, since they accomplish these objects without occasioning subsequent head-ache, feverishness, or any other unpleasant symptom. This is a point requiring particular attention when we wish to procure sleep, or ease pain, in diseases attended with inflammatory or febrile symptoms; but it is not so much attended to by some professional men as it ought to be.

Another Anodyne Draught **No. 23**

Take of Camphor mixture,..... 1 ounce;
Nitrate of potash ..... 4 grains;
Hoffman's liquor, that is, the compound
spirit of sulphuric ether, ... 1 drachm;
Battley's solution of opium ..... 10 drops, or more;
Syrup of poppies ..... 1½ drachm.
Mix them together for a draught, to be taken at bed time to procure sleep, or allay irritation.

Refrigerant Draught for Fevers **No. 24**

Take of Bi-carbonate of potash, ... 1 scruple;
Cinnamon water..... 2 drachms;

1. Many persons cannot bear either laudanum or Battley's solution and yet they require an opiate, or some anodyne. in which case I recommend a trial of ten drop: of the solution of muriate of morphia; in a large table-spoonful of lemon juice or vinegar. Or a quarter of a grain of the muriate of morphia made into a pill and taken with the lemon juice, will answer quite as well.

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Common water ..... a wine-glassful;
Syrup of orange peel ..... 1 drachm.
Mix them and, when taken add a table-spoonful of lemon juice, or 15 grains of citric acid, powdered and drink it immediately.

This is the effervescing saline draught which is usually given in fevers and inflammatory diseases, to allay heat, quench thirst and determine to the surface of the body, for which purposes it is often used with great and immediate effect. It may be repeated every three hours. When the heat and thirst are very considerable, it is frequntly advisable to add six or eight grains of purified nitre to each draught, by which its efficacy is much increased.

Carminative Draught **No. 25**

Take of Sesquicarbonate of magnesia ..... 1 drachm;
Rhubarb, in powder ..... 6 or 8 grains;
Oil of aniseed ..... 3 drops;
Liquor potassae ..... 12 drops;
Water of ammonia ..... 8 drops;
Dill or pimento water ..... 2 ounces.
Mix them together.

This is valuable in neutralizing acidity in the stomach and bowels, relieving depressed spirits and imparting a comfortable warmth internally. It is aperient and is very useful in heart-burn and indigestion; and, in the dose of a dessert-spoonful, may be given with great advantage in the gripings and flatulency of infants or young children.

Draught for Diarrhoea **No. 25A**

Take of Compound powder of chalk ..... 10 grains;
Timcture of catechu ..... 1 drachm;
Cinnamon water ..... 9 drachms.
Mix for a draught, which is an astringent very useful in checking diarrhoea in fever and on ordinary occasions. It

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may be repeated twice a day, if necessary and is well adapted for ordinary domestic use.

Diaphoretic Cooling Draught **No. 26**

Take of Solution of acetate of ammonia	3	drachms;
Camphor mixture	10	drachms;
Ipecacuanha wine	30	drops;
Syrup of tolu	1	drachm.

Mix. To be repeated every four hours.

This is very useful and is in common use, in fevers and inflammations. It promotes a gentle perspiration, relieves heat, quenches thirst and tends to lower tire pulse.

Purging Draught **No. 27**

Take of Epsom salt, Glauber's salt, of each ..	2	drachms;
Spearmint water, ...	1½	ounce;
Antimonial wine, ...	40	drops;
Tincture of senna, ...	3	drachms.

Mix.

This is a very valuable and effectual purgative for all acute diseases and most common purposes. If a purgative be required which will operate very quickly and powerfully, the draught may be repeated at the end of an hour, or half an hour.

Aperient Draught **No. 27A**

Take of Sulphate of potash	1½	drachm;
Carbonate of potash	10	grains;
Powder of jalap	6	grains;
Manna	2	drachms;
Infusion of senna, pimento water, of each, ...	6	drachms.

Mix them together.

This is a mild and yet effectual aperient, suitable for domestic purposes.

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Excellent Draught For Acute Rheumatism **No. 27B**

Take of Bicarbonate of potash	1	drachm;
Acetate of potash		half a drachm;
Solution of acetate of ammonia	2	table-spoonfuls;
Water,	2	wine-glassfuls.

Mix them in a tumbler and take this draught every four hours, in a state of effervescence, by adding to each draught, at the time of taking, one scruple of citric acid.

This is one of the safest and most *effectual* remedies now known for acute rheumatism, whenever the urine is acid and the fever high. Half a tumbler of plain water, or barley water, should be taken directly after every draught.

Common Black Draught **No. 28**

Take of Compound infusion of senna	1½	ounce;
Pimento water	2	drachms;
Manna	1	drachm;
Epsom salt	2	drachms or more.

Mix.

This is the common purging draught so much in use with apothecaries on all ordinary occasions.

Emetic Draught **No. 29**

Take of Emetic tartar	1	grain;
Powder of ipecacuanha	15	grains;
Common water	1½	ounce.

Mix.

This is commonly employed for unloading the stomach on the accession of fevers and in ordinary cases.

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Another **No. 30**

Take of Blue vitrol, (sulphate of copper)	10	grains;
Distilled water	2	ounces.

Mix.

This operates instantaneously and is very proper when laudanum, or any other deleterious substance, has been taken as a poison.

Another Emetic Draught **No. 31**

Take of Sesqui-carbonate of ammonia	1	scruple;
Ipecacuanha, in powder		half a drachm;
Peppermint water	3	ounces;
Tincture of cayenne pepper	2	drachms.

Mix for a draught, to be taken directly.

In case of poisoning, this is said to be more certain and effectual in arousing the action of the stomach, than either of the preceding draughts.

Antispasmodic Draught **No. 32**

Take of Ammoniated tincture of valerian	2	drachma;
Tincture of castor	1	drachm;
Battley's sedative liquor of opium	20	drops;
Camphor mixture	1	ounce;
Syrup of tolu	1	drachm.

Mix.

This is a valuable antispasmodic in spasm of the stomach arising from flatulence or weakness and in the hysterics and convulsive disorders, of the weakly and delicate.

Tonic Draught for the Nervous **No. 33**

Take of Compound tincture of bark, ammoniated tincture of valerian, of each	1	drachm;

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Compound tincture of aloes	10	or 12 drops;
Camphor mixture	1½	ounce.

Mix.

This is a strengthening draught, of great service to the weakly and nervous. It may be repeated two or three times a day.

Draught for Heartburn **No. 34**

Drop fifteen drops of water of ammonia (not the strongest preparation) into two ounces of almond mixture, or of common water.

This is a powerful remedy for heartburn and other cases of morbid acidity of the stomach. Stir it before drinking.

Febrifuge Tonic Draught **No. 35**

Take of Solution of acetate of ammonia	2	or 3 drachms;
Decoction of bark	1½	ounce;
Tincture of bark	1½	drachm;
Aromatic confection		half a drachm.

Mix.

This is a mild tonic draught, combined with a diaphoretic, to make it suitable to those cases of disease which call for a strengthening medicine, but which, from the existence of a hot and dry skin, or other symptoms of fever, require us to unite the tonic with a medicine which relaxes the skin and tends to abate fever.

Soothing or Sedative Effervescing Draught **No. 35 A**

Take of Sesqui-carbonate of ammonia	1	scruple;
Water	1½	ounce;
Syrup of orange peel	1	drachm.

Mix them together and take it with a table-spoonful and a half of lemon juice, or twenty-four grains of citric acid, added. It may be repeated two or three times a day.

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This is very soothing and useful in all cases of great irritability or nervous excitement. It is very refreshing when tired or ill, and may be used with great advantage in colds, fevers and inflammation of the lungs, or bronchia and in acute rheumatism. It is at once sustaining and soothing.

Draught for Spasm and Depression **No. 35B**

Take of Compound spirit of either,
sal volatile, of each ..... half a drachm;
Camphor mixture ..... 10 drachms.
Mix them and repeat the draught every three or four hours if necessary. It is useful in most cases of difficulty of breathing, spasm and depression of spirits.

ELECTUARIES

Electuaries are mixtures of vegetable and light earthy powders, combined by means of honey or syrup, so as to form masses of a moderate consistence. All substances of this description may, therefore, be made into electuaries; but as the intention of this form of preparation is to render remedies as palatable as possible, those matters only can be employed to form electuaries, the taste of which is not too ungrateful to be covered with syrup or honey.

Astringent Electuary **No. 36**

Take of Extract of catechu ..... 1 ounce;
Kino ..... 6 drachms;
Cinnamon bark, nutmegs, of each, ... 2 drachms;
Opium, diffused in a sufficient
quantity of white wine ..... 20 grains;
Syrup of red roses, boiled to the
thickness of honey ..... 9 ounces.
Reduce the solid ingredients to powder; then mix them with the opium and syrup, so as to form an electuary.

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This is a valuable combination of astringents and aromatics and is often of great service in looseness and bloody flux, especially in the chronical form of these complaints and in their advanced stages. The dose is from a scruple to two drachms, which may be taken in the form of a bolus, or diffused in cinnamon or dill water and repeated twice or thrice a day.

Aperient Electuary **No. 37**

Take of Cream of tartar	1	ounce;
Milk of sulphur	1	ounce;
Sub-borate of soda	2½	drachms;

Syrup of ginger, a sufficient quantity to form an electuary.

The dose is one or two tea-spoonfuls at bed-time, or twice a day, according to its action on the bowels, which ought to be moderate.

This acts very mildly as an aperient and is sometimes particularly useful in aiding the other means employed to remove the uterine obstructions of females.

Electuary for the Piles **No. 38**

Take of Flowers of brimstone		half an ounce;
Lenitive electuary	2	ounces;
Cream of tartar	3	drachms;
Oil of cinnamon	3	drops;

Syrup of orange peel, a sufficient quantity to make the whole of a proper consistence.

Mix.

A tea-spoonful or two, should be taken once or twice a day, so as to keep the bowels gently open. It is a very effectual aperient and alterative for the piles and will rarely fail in affording great relief.

The manner of preparing the Lenitive Electuary is described under that article at page 79.

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EMBROCATIONS AND LINIMENTS

These are compositions which have the consistence of oil or balsam; so as to allow them to be easily rubbed upon the skin. They are in general more active remedies than cerates or ointments; and act as local stimulants, relieving deep-seated inflammation and pains.

Embrocations for Sprains and Bruises — No. 39

Take of Compound liniment of camphor .... 1½ ounce;
Tincture of opium ..... half an ounce.
Mix.

This is a very useful application to sprains and bruises, after all inflammation has disappeared and for rheumatic pains. Warmed and rubbed over the surface of the abdomen, it is of much service in allaying the pain of colic unattended by inflammation.

Exbrocation for Bruises, when Inflamed — No. 40

Take of Solution of acetate of ammonia and
soap liniment, of each ..... 1 ounce.
Mix.

This is useful when bruises and sprains are accompanied with inflammation.

Guestonian Application for Rheumatism — No. 41

Take of Olive oil, of turpentine, of each ..... 1½ ounce;
Spirit of vitriol ..... 3 drachms.
Mix.

This is an excellent stimulant embrocation for rheumatism, sprains, chilblains and other cases in which an active application is necessary.

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Sir Astley Cooper's Chilblain Liniment **No. 42**

Take of Camphorated spirit of wine ..... 1 ounce;
Liquor of subacetate of lead ..... half an ounce.
Mix and apply in the usual way three or four times a day. It is very efficacious.

Roche's Embrocation for Hoofing-Cough **No. 43**

Take of Olive oil ..... 8 ounces;
Oil of amber..... 4 ounces;
Oil of cloven, a sufficient quantity to scent it strongly.
Mix.

This is the same as the famous embrocation of Roche. When rubbed on the chest, it stimulates the skin gently and is sometimes serviceable in pooping-cough and the other coughs, of children; but in pooping-cough it ought not to be used for the first three days of the disease.

Valuable Lotion for Hoofing-Cough, Etc. **No. 44**

Dissolve one drachm of emetic tartar into two ounces of common water, then add half an ounce of tincture of Spanish fly.

This is a very valuable lotion in the advanced stages of pooping-cough and is likewise of much service in all other coughs, as well of adults as children. It is often of singular utility in removing the distressing cough and oppression of the chest, left after the hoop has quitted the patient. After it has been rubbed into the chest night and morning for about a week, it will create a redness and bring out some small pustules, when the lotion should be applied only once a day; and if the part becomes very sore, it may be laid aside altogether and the pustules anointed, twice a day, with simple white ointment.

In very severe cases it will be necessary to continue the use of this lotion until a large crop of pustules appear; and if they are kept

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discharging freely, for a week or fortnight, by an occasional use of it the relief will be more striking and permanent.

Strong Liniment of Ammonia **No. 45**

Take of Water of ammonia, or spirit of hartshorn	1	ounce;
Olive oil	2	ounces.

Shake them together till they unite.

This is an excellent rubefacient liniment and is efficaciously employed in inflammatory sore-throat, spread on a piece of flannel and applied round the throat, or rubbed in.

Strong Stimulating Liniment **No. 46**

Take of Strong liniment of ammonia (No. 45)	1½	ounce;
Oil of turpentine	1	ounce;
Spirits of camphor	1	ounce;
Hard soap	4	drachms.

Mix them well together.

This is a strong application, suitable for spasms, palsied limbs and severe cases of chronic rheumatism, where there is no inflammation; also for sprains bruises, coughs and oppression in the stomach or chest.

Anodyne Liniment **No. 46B**

Take of Compound soap liniment	2	ounce;
Tincture of cantharides		half an ounce;
Tincture of opium	1½	ounce.

Mix them.

This is useful in sprains, bruises; and rheumatism attended with great pain: to be rubbed in four or five times a day.

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EMULSIONS

Emulsions are mixtures of bland mucilaginous substances with water and are used to allay irritation in the lungs, alimentary canal and other parts and likewise as vehicles for certain substances, which could not otherwise be so conveniently taken in a liquid form.

Emulsion of Gum Arabic — No. 47

Take of Gum arabic, in powder ..... 2 drachms;
Sweet almonds, blanched, white
sugar, of each ..... half an ounce
Barley water, warm ..... 1 pint.

Dissolve the gum in the warm barley water and when it is almost cold pour it gradually upon the almonds, previously beaten to a powder with the sugar, rubbing them at the same time so as form a milky mixture; then strain.

This is a useful demulcent in common colds and coughs and in strangury and general irritation about the urinary organs; and as a pleasant vehicle for the exhibition of more active remedies in these and other complaints.

Almond Emulsion — No. 48

Take of Almond confection ..... 2 ounces;
Common water ..... 1 pint.

Add the water gradually to the almond confection whilst rubbing and then strain.

Emulsion for Recent Coughs — No. 49

Take of Oil of sweet almonds ..... 1 ounce;
The yolk of one egg,
Orange flower water ..... 5 ounces;
Mucilage of gum arabic ..... half an ounce;
Ipecacuanhia wine ..... 1½ drachm;

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Syrup of marsh-mallows ..... half an ounce.

Mix them. The dose is a table-spoonful when the couch is troublesome. This in half the dose may be given to young children for the relief of cough.

Emulsion for Old Coughs — No. 50

Take of Gum ammoniac ..... 2 drachms;
Water ..... half a pint.

Rub the ammoniac well, gradually adding the water until they are thoroughly mixed and then strain through linen.

This is a useful expectorant in old coughs and asthmas, when no inflammatory symptoms are present. The dose is from one to two table-spoonfuls, united with an equal quantity of almond emulsion.

Egg Emulsion — No. 51

Rub the yolks of three new laid eggs and a little white sugar, with a pint of cold water, adding to it afterwards a glass of the best sherry, Madeira, or Rhenish wine, 2 drops of oil of cinnamon and a little lemon juice, to give it a flavour.

This forms a very nourishing restorative drink, of great benefit in cases of debility and when a patient is recovering from an attack of some severe disease. This emulsion, if a wine-glassful is taken at a time, is a good remedy in coughs, hoarseness, spitting of blood and costiveness.

Cough Linctus — No. 51A

Take of Oil of almonds, syrup of lemons, of each 1 ounce;
Powder of ipecacuanha ..... 6 grains;
Conserve of hips (confectio rosa canin) ..... 1 ounce;
Compound powder of tragacanth ..... 3 drachms.

Mix them and swallow slowly a tea-spoonful now and then, when the cough is troublesome.

This is a useful linctus in case of cough or hoarseness.

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ENEMAS.—*See* **Clysters, p. 146**

EXTRACTS

These are preparations obtained by evaporating aqueous and spirituous solutions of vegetable substances, until a mass of a somewhat firm tenacious consistency remains. By this means the active principles of many plants are procured in a small compass and in a state very favourable for the formation of pills, whirl: is a mode of administering medicines far more agreeable to the generality of patients and, in many instances, the most eligible, as being less offensive to the stomach.

A method of preparing extracts in *vacuo* has been introduced by Mr. Barry, of Plough Court, which is far superior to the former method of conducting the process, especially in preparing the extracts of hemlock, henbane and other narcotic plants. Indeed, there are no extracts of such plants meriting so much dependence as those prepared *in vacuo*. They may be purchased also at Apothecaries' Hall.

The *Compound Extract of Colocynth* of the shops, when good, is a valuable combination of colocynth and other purgative medicines, which operates much more mildly and effectually than either of them singly and is an aperient combination of great repute for its efficacy in obviating and removing costiveness and relieving all those complaints which depend upon, or are aggravated constipation. The ordinary dose is five grains, which may be taken either alone, or combined with half a grain or a grain of calomel. *See* page 191-192.

The *Extract of Gentian* is a useful bitter tonic, containing all the virtues of the plant. The dose is ten grains, twice or thrice a day. It is also a convenient vehicle for the exhibition of preparations of steel, zinc and other metallic tonics.

The *Extract of Garden Lettuce* and the *Extract of Poppies*, are mild narcotics, which are beneficially employed to relieve lain and procure sleep, in delicate habits, and where there is an objection to

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the use of opium arising from the presence of inflammation, or from other causes.

The *Extracts of Hemlock, of Henbane a*nd of *Sarsaparilla*, are excellent forms for administering those medicines, which are of great service in cancerons, scrophulous, rheumatic *a*nd several other severe diseases.

Extract of Dandelion is very useful in stomach and liver complaints, in the dose of ton or twenty grain, mixed with a wine-glassful of water or more. Its proper taste is bitter and aromatic, not sweet.

The *Extracts of Bark* and of *Rhubarb,* are not unfrequently prescribed by professional men, but are not much to be depended upon.

FOMENTATIONS

Warm fomentations are well known to ease pain, relieve irritation and tension, relax spasm and induce slight perspiration from the surface to which they are applied; while cold fomentations tend to brace and invigorate relaxed and debilitated parts. They are a simple remedy, but often prove of considerable service.

Anodyne Fomentation — No. 52

Take of White poppy heads ..... 3 ounces;
Elder flowers ..... half an ounce;
Water ..... 3 pints.
Boil till one pint is evaporated, then strain out the liquor.

This fomentation is used to relax spasm and relieve acute pain. Sometimes it may be advisable to add three tea-spoonfuls of tincture of opium to it.

Common Fomentation — No. 53

Take of Common mallows, or marsh mallows 1 ounce;
Chamomile flower, dried ..... half an ounce;

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Water ..... 1 pint.
Boil for a quarter of an hour and strain.

This is a very good fomentation for all common occasions.

Strengthening Fomentation **No. 54**

Take of Decoction of oak bark ..... 2 pints;
Alum, ... 3 drachms.
Mix.

This is an astringent liquor, which is employed with considerable effect as a fomentation to weak parts.

GARGLES

These preparations, as well as those last noticed, are simple remedies, but are of no mean efficacy in allaying irritation and inflammation, in promoting a favourable suppuration, or in astringing and invigorating the membrane lining the throat and mouth, according to the nature of the ingredients of which their are composed and the object to be accomplished in their employment.

Gargles may be divided into four classes, according to the different objects we have in view in employing them: (1) Those employed for the purpose of procuring a subsidence of the irritation or inflammation, without the formation of an abscess— what surgeons call resolution; (2) Those proper when suppuration and abscess are unavoidable; (3) Those employed when the abscess has burst spontaneously, or been laid open; and (4) Those which are necessary when a tendency to gangrene or mortification has supervened.

When the inflammation is slight, it is of little consequence whether gargles be cold or lukewarm; but when it is more severe, they should be of the same temperature as the body. If we are endeavouring to promote suppuration, their temperature should be higher.

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Gargle for Irritation and Inflammation **No.55**

Take of Purified nitre..... 2 drachms;
Barley water..... 7 ounces;
Acetate of honey ..... 7 drachms.
Mix. To be used frequently.

Another **No. 56**

Take of Muriatic acid ..... half a drachm;
Decoction of black currant leaves,
or barley water..... 7 ounces.
Mix.

These gargles are proper when the object is to reduce the inflammation in the throat without its proceeding to suppuration. They are likewise proper in relaxed sore-throat. The second possesses cleansing qualities and is proper when the fauces are clogged with viscid mucus. It may be made still more detergent, if necessary, by increasing a little the quantity of acid.

Excellent Domestic Gargle **No. 57**

Mix together, in a half-pint tumbler, three tea-spoonfuls of vinegar, two tea-spoonfuls of tincture of myrrh, two of honey and about one-fourth of a tumbler of Port wine; then fill up the tumbler with lukewarm water and the gargle is fit for use.

It is both a pleasant and efficacious gargle in all cases of sore-throat. If a decoction of black currant leaves is used instead of lukewarm water, it much improves the gargle.

Mucilaginous Gargle for Inflammation **No 58**

Take of Tincture of myrrh ..... 3 drachms;
Emulsion or mucilage of gum arabic..... 7 ounces.
Mix.

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This is useful to defend the parts when the saliva is thin and acrid.

Gargle to Promote Suppuration **No. 59**

Mix together equal parts of compound barley water and compound infusion of linseed. To be used warm.

When we wish to promote suppuration the gargle must be mild and be used warm and in large quantity, that its temperature may not lie suddenly reduced, since nothing for this purpose is more powerful than warmth.

After the abscess is burst, our view is to dispose the parts to heal; emollient and gently astringent gargles are the best for this purpose and in No. 57, or by adding three drachms of tincture of myrrh to half a pint of compound decoction of barley, we shall have a gargle of this description.

Gargle For Threatened Gangrene **No. 60**

Take of Tincture of capsicum	6 drachms;
Honey of roses	3 drachms;
Infusion of roses, or thin yeast	half a pint.

Mix.

Another **No. 61**

Take of Tincture of capsicum	6drachma;
Infusion of Peruvian bark	5ounces;
Port wine	3ounces.

Mix.

These are proper when a tendency to gangrene or mortification appears.

INFUSIONS

Infusions are solutions of vegetable matter, obtained by maceration,

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either in cold or boiling water. The strength and quality of infusions are varied by the degree of temperature of the water; those made with hot water being necessarily stronger, but particularly in the case of bitters; cold infusions are more grateful.

In making infusions, when heat is required, the vessel is to be placed near the fire, so that the temperature of the water may be kept up to the necessary point for a sufficient length of time to produce the effect intended.

Infusion of Peruvian Bark **No. 62**

Take of Lance-leaved Peruvian bark, bruised . half an ounce;
Boiling water ..... half a pint.
Macerate for two hours in a lightly covered vessel and strain.

This infusion contains a considerable portion of the febrifuge and strengthening matter of the bark. It is very useful in convalescencies from acute diseases.

Bitter Tonic Infusion **No. 63**

Take of Gentian root, sliced ..... half an ounce;
Dried orange feel, bruised ..... 1 drachm;
Coriander sees, bruised ..... 1 drachm;
Boiling water ..... 12 ounces.

Macerate for an hour in a lightly covered vessel and strain. This compound infusion of gentian is an elegant and efficacious tonic and stomachic, which is beneficially employed in indigestion, general debility, chronic gout and other diseases. The dose is from an ounce to two ounces, two or three times a day.

Diuretic Infusion **No. 64**

Take of Dried foxglove leaves..... 1 drachm;
Boiling water ..... half a pint.
Macerate for four hours in a light covered vessel and strain; then add of spirit of cinnamon, half an ounce.

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This is a form of exhibiting foxglove well calculated to obtain speedily the diuretic effects of the remedy, in dropsical affections.

The dose is from one to two table-spoonfuls, given twice a day, or every eight hours, if the patient be strong and the symptoms very urgent.

Infusion of Calumba or Cascarilla **No. 65**

Is made in the same way as the last infusion, taking Calumba or Cascarilla root instead of foxglove leaves.

Demulcent Infusion **No. 66**

Take of Linseed, braised	1	ounce;
Liquorice root, sliced		half an ounce;
Boiling water	2	pints.

Macerate for four hours near the fire, in a covered vessel and strain.

Compound infusion of linseed is a particularly useful demulcent and is efficaciously used as such in inflammation and irritation in the urinary organs, in recent coughs and other disorders and as a vehicle for other remedies.

Compound Infusion of Senna **No. 67**

Take of Senna leaves	1½	ounce;
Ginger root, sliced	1	drachm;
Boiling water	1	pint.

Macerate for an hour in a lightly covered vessel and strain the liquor.

This is a useful purging infusion, in common use among medical men. It is usually given in conjunction with a little Epsom or Glauber's salt, which forms a purging mixture of great service in all acute disease.

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LINCTUS

Linctus for Chronic Cough and Bronchitis — No. 67A

Take of Tartarized antimony ..... 2 grains;
Distilled water ..... ½ ounce.
Oxymel of squills..... 2½ onces;
Mix and take a tea-spoonful or two, three or four times a day.

This is very efficacious in promoting expectoration, unloading the congested vessels of the bronchia and lungs in severe hoarseness and cough and in chronic hooping cough. I have speedily and permanently relieved patients suffering from chronic bronchitis and difficulty of breathing by means of this linetus; after they had been discharged from hospitals as incurable and almost without any relief.

LOTIONS

Lotions Cooling Discutient Lotion — No. 68

Take of Sal ammoniac ..... 2 drachms;
Water ..... 5 ounces;
Rectified spirit of wine ..... 1 ounce.
Mix.

This is an excellent cooling lotion for all inflammatory tumours.

Superior Goulard Water — No. 69

Take of Extract of lead (liquor plumbs acetatis) 1 drachm;
Distilled vinegar ..... 2 ounces;
Proof spirit of wine ..... half an ounce;
Water ..... 1 pent.
Mix

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Lotion for Inflammation and Humours **No. 69 A**

Take of Spirit of wine ..... 2 ounces;
vinegar ..... 4 ounces;
Water ..... 6 ounces.

Mix together first the spirit of wine and vinegar, then add the water.

This is an excellent application for inflammation, swelling and watery humour in the limbs, brought on by violent exertion, or from any other cause. Apply the lotion by wetting short pieces of calico or linen and laying them on the limb over the part affected.

Nitric Acid Lotion **No. 70**

Mix together 2 drachms of diluted nitric acid and a pint of water.

The nitric acid lotion is stimulating and detergent and is very serviceable when applied to foul foetid ulcers, attended with a thin ichorous discharge, from whatever cause arising. It is also useful in caries of the bone and when there is an impending mortification. It was a favourite lotion of Sir Astley Cooper in numerous instances of unhealthy ulceration, which require the application of a mild yet effectual stimulant.

Anodyne Lotion **No. 71**

Take of Crude opium ..... 2 drachms;
Warm water ..... 1 pint.

Rub the opium in a mortar with a little of the warm water, for a few minutes, then pour the remaining quantity of water upon it and mix them well together.

This is beneficially applied to painful irritable ulcers and to all painful swellings in which the use of opium is proper.

Astringent Lotion **No. 72**

Take of Sulphate of zinc ..... 2 drachms;

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Water ..... 1 pint;
Camphorated spirit of wine ..... 2 drachms.
Mix.

This is a very valuable lotion for piles and relaxation about the anus. It should be used night and morning.

Soothing Lotion **No. 72A**

Take of. Oxymuriate (bichloride) of mercury . 8 grains;
Rectified spirit of wine ..... half an ounce;
Distilled water ..... 7½ ounces.
Mix them for a lotion.

This is very soothing and effectual in itching and painful eruptions on the scalp or anus or elsewhere.

Strong Astringent Lotion **No. 72 B**

Mix together a pint of decoction of oak bark (No. 21) and 2 ounces of alum.

This is very valuable as a lotion for piles and prolapsus of the anus, for which purpose the parts should be washed with it thrice a day.

MIXTURES

Valuable Guaiacum Mixture **No. 72 C**

Take of Guaiacum ..... 3 drachms;
Sugar ..... half an ounce;
Mucilage of gum arabic ..... half an ounce;
Cinnamon water..... 19 ounces.
Rub the guaiacum with the sugar, then with the mucilage and to these, while rubbing, add gradually the cinnamon water.

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This is an admirable remedy for rheumatism, particularly for the chronic kind, operating both by stool and perspiration. It is strongly recommended in this work. The dose is from two to four table-spoonfuls, twice or thrice a day, according to its action on the bowels, which should be moderate in chronic cases. Rheumatic pains are much benefited by it.

Purging Mixture **No. 73**

Take of Epsom salt, Glauber's salt, of each ..		half an ounce;
Spearmint water	5½	ounces;
Antimonial wine	2	drachms;
Tincture of senna		half an ounce.

Mix.

Useful on all ordinary occasions as a purging medicine. Two, three or four table-spoonfuls may be taken for a dose and repeated, if necessary, every three hours till it operates.

Abernethy's Aperient Mixture **No. 74**

Take of Epsom salt		half an ounce;
Infusion of senna	6	drachms;
Tincture of senna	2	drachms;
Spearmint water	1	ounce;
Distilled water	2	ounces;
Best manna	2	drachms.

Mix and take three, four or five table-spoonfuls every morning or every other morning.

This was a favourite prescription with Abernethy; and I have known it extremely useful in chronic disorders of the stomach and bowels, when two or three grains of blue pill were taken every second night during the same period.

Tonic Aperient Mixture **No. 74A**

Take of Decoction of bark, infusion of senna, of each	3½	ounces;

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Sulphate of potash ..... 3 drachma;
Compound tincture of bark ..... half an ounce.
Mix them together and take three table-spoonfuls, once or twice a day, so as to keep the bowels regular or it may be used only occasionally, when an aperient is required.

Another Tonic Aperient Mixture **No. 74B**

Take of Infusion of cascarilla or calumba and compound decoction of aloes, of each..... 3½ ounces;
Sulphate of potash ..... 4 drachms;
Tincture of calumba..... half an ounce.
Mix them and take the same dose and in the same way, as prescribed in the last prescription.

The combination of direct tonics with aperients is a form of prescription likely to be of great service in numerous instances and much called for. Weakness in the bowels is very often the chief cause of costiveness and in seeking to remove the effect, solely by means of aperients or purgatives, which act through irritation only, we do but add to the mischief. Tonics should, therefore, be combined with aperients, whereby we shall often at once strengthen the bowels and effect a more certain and comfortable exoneration of them.

Jephson's Tunic Aperient Mixture **No. 74C**

Take of Epsom salt ..... 1 or 2 drachms;
Sulphate of iron ..... 6 grains;
Battley's liquid dandelion ..... half an ounce;
Dilated sulphuric acid ..... 1 drachm;
Water, or infusion of orange peel ..... 5½ ounces.
Mix them and take three table-spoonfuls twice a day, so as just to keep the bowels regular.

This is similar to the favourite aperient mixture of Dr. Jephson of Leamington, which he was so much in the practice of prescribing

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and which acts on the bowels without debilitating. It is an excellent alterative and tonic.

Dr. Budd's Remedy for Jaundice **No. 74D**

Take of Epsom salts	3	or 4 drachms;
Carbonate of magnesia	1	drachms;
Aromatic opirit of amonia	2	drachms;
Pure water	5½	ounces.

Mix and take one-fourth once or twice a day.

Emetic Mixture **No. 75**

Take of Emetic tartar	4	grains;
Water	3	ounces
Syrup of mulberries	2	drachms.

Mix.

This emetic may be given with great advantage in the commencement of fevers and in all cases where emetic tartar is proper. It should never be given to infants, nor to very young children, unless under the direction of a medical man, ipecacuanha wine being preferable in such subjects. The dose of this mixture is two table-spoonfuls every ten or twelve minutes till it begins to operate.

Mixture for Recent Cough **No. 76**

Take of Honey	5	ounces;
Treacle		quarter pound;
Best vinegar	7	ounces.

Mix them and simmer in a common pipkin over the fire for fifteen minutes; after removing it from the fire and the mixture has become lukewarm, add three drachms of ipecacuanha wine. The dose is a table-spoonful every four hours for adults.

In the opinion of the present author this is one of the best

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mixtures now known for recent cough. On account of its pleasant taste, it is particularly eligible in the coughs of children and infants...

Mild Cough Mixture **No. 76A**

Take of Camphor mixture	4	ounces;
Solution of acctate of ammonia	8	drachms;
Nitre	2	scruples;
Antinonial wine	1	drachm;
Syrup of tolu	4	drachms.

Mix them and take one-fourth thrice a day.

This is especially adapted to couch accompanied with fever.

Toxic Cough Mixture **No. 77**

Take of Myrrh, in powder	1½	drachm
Decoction of liquorice (warm)	5½	ounces.

Rub them together and strain it. Then add one drachm of arometic sulphuric acid. The dose is two table-spoonfuls two, three or four times a day.

This is an excellent. strengthening cough mixture, applicable in all coughs where debility and languor are present, provided much inflammatory action does not exist.

Mixture for Chronic and Habitual Cough **No. 78**

Take of Mixture of gum ammoniac, cinnamon water, of each	24	ounces;
Ipecacuhana wine	2	drachms;
Paregoric elixir		half a drachm;
Syrup of tolu	6	drachms.

Mix.

The dose of this composition is a table-spoonful every four hours, or when the cough is troublesome. It is well adapted to all cases of asthma and chronic cough.

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Mixture for Chronic Cough and Bronchitis **No. 78A**

Take of Sesqui carbonate of ammonia..... 36 grains;
Tincture of squills ..... 3 drachms;
Camphor mixture, to complete, ... 6 ounces.
Mix them and take two table-spoonfuls thrice a day.

This promotes a free expectoration and is of signal service in all the coughs of old people. It is very sustaining and improves the duality of the blood and the respiration.

Mixture for Acute Bronchitis **No. 78B**

Take of Antimonial wine, fresh prepared .... 3 drachms;
Sweet spirits of nitre ..... 1 drachm;
Tincture of henbane..... 1 drachm;
Mixture of gum arabic, syrup of
orange peel, of each..... half an ounce;
Solution of acetate of ammonia..... 1½ ounce;
Camphor misture, sufficient to complete a six ounce
mixture; of which take a fourth part every three hours.

This is very efficacious in subduing inflammation in the bronchia, and promoting a free expectoration, in the acute stage of bronchitis, particularly when much difficulty of breathing is present, with lividity in the complexion and a pulse small and quick and the patient expectorates a glairy transparent mucus.

In children under two years of age, ipecacuanha wine should be substituted for the antimonial wine; and at that age a tenth part of the mixture is sufficient for a dose.

Mixture for Recent Cough **No. 78C**

Take of Almond mixture, sufficient to make.. 6 ounces;
Ipecacuanha wine ..... 1½ drachm;
Bicarbonate of potash ..... 2 drachms;
Syrup of tolu ..... half an ounce.

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Mix them and take three table-spoonfuls, with a table-spoonful of lemon juice, or 24 grains of citric acid, when the cough is troublesome.

This is very useful in all coughs and is pleasant to the taste.

Sustaining Remedy in Cough and Bronchitis No. 78D

Take of Sesqui carbonate of ammonia.....	1½	drachm;
Solution of acetate of ammonia, fresh prepared.....	4½	ounces;
Antimonial wine		half an ounce;
Camphor mixture.....	6	ounces;
Syrup of tolu	1	ounce.

Mix them and take two table-spoonfuls, in one or two table-spoonfuls of water, every four hours.

This is sustaining, diaphoretic and expectorant and is of eminent utility in cough and bronchitis and inflammation of the lungs, especially in elderly people and where symptoms of debility and sinking show themselves. It improves the quality of the blood, restrains inordinate secretions and prevents the deposition of fibrine from the blood. It thus proves useful also in female complaints.

Valuable Cordial Mixture No. 79

Take of Camphor mixture	5½	ounces;
Distilled water	1½	ounce;
Sesqui carbonate of ammonia	2	scruples;
Compound tincture of cinnamon	1½	drachm;
Spirits of lavender	2	drachms;
Syrup of ginger	3	drachms.

Mix them and take three table-spoonfuls twice or thrice a day.

This is useful in low spirits, debility and as a cordial tonic in some cases of indigestion attended with acidity and flatulence, or uneasiness in the bowels.

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Valuable Gout Mixture **No. 80**

Take of Calcined magnesia	4	scruples;
Epsom salt	6	drachms;
Spearmint water	5	ounces;
Vinegar of colchicum	2	drachms;
Syrup of common saffron		half an ounce.

Mix.

This is an excellent mixture for opening the bowels and mitigating the severity of pain, in gout and acute rheumatism. It was first proposed by Sir C. Scudamore and is usually administered at the commencement of the attack of gout and rheumatism, a fourth part of it to be taken every six or eight hours until the bowels are freely moved; after which it may be continued, in doses of three or four table-spoonfuls every morning, or every second morning, to keep the bowels in a lax condition, through the whole continuance of these diseases.

Mixture for Stomachic Irritation **No. 80 A**

Take of Prussic acid	25	drops;
Ipecacuanha wine	30	drops;
Tincture of henbane	60	drops;
Tincture of orange peel		half an ounce;

Infusion of orange peel, sufficient to make up six ounces.

Mix them and take two table-spoonfuls twice or thrice a day.

This mixture will be found very efficacious in the relief of some cases of stomachic irritation. It is very soothing to the stomach and is especially indicated under circumstances of long-continued irritability of that important organ.

Mixture for Diarrhoea **No. 80B**

Take of Aromatic confection	2½	drachms;
Tincture of catechu	7	drachms;

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Tincture of opium ..... 1 drachm;
Chalk mixture cinnamon water, of each, ... 3½ ounces.
Mix. Excellent for ordinary occasions. The dose is a wine-glassful, after each liquid motion.

Fever Mixture **No. 81**

Take of Bi-carbonate of potash ..... 2 drachms;
Purified nitre ..... 30 grains;
Camphor mixture ..... 2 ounces;
Water to make a six ounce mixture,
Antimonial wine, recently prepared ..... 1½ drachm;
Syrup of saffron ..... 3 drachms.
Mix and for a dose take two table-spoonfuls, which should be mixed with a wine-glassful of water and a table-spoonful of lemon juice, or twenty-five grains of citric or tartaric acid and drank immediately. This may be repeated every three or four hours.

This is a cooling mixture of much service in all inflammatory fevers and acute inflammations.

Tonic Mixture for Indigestion **No. 82**

Take of Infusion of calumba ..... 5½ ounces;
Compound tincture of cinnamon ..... 2 drachms:
Sesqui-carbonate of ammonia ..... 2 scruples;
Syrup of orange peel ..... 2 drachms.
Mix.

This is an appropriate tonic in indigestion and bilious complaints; and it is useful in checking the severe vomiting which often occurs during pregnancy. The dose is two table-spoonfuls every four hours or twice a day.

Cinnamon Mixture for lose of Blood **No. 82A.**

Take of Compound tincture of cinnamon .... 6 drachms;

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Cinnamon water..... 5 ounces and
2 drachms;

Mix them and take two table-spoonfuls, thrice a day.

This is a very pleasant and efficacious remedy for discharge of blood from the nose, womb, bowels and other parts when the blood is dark coloured, when the loss of blood is not of an active, but of a passive nature. That is, when the blood, instead of being bright and arterial is dark-coloured and venous.

Tonic Mixture **No. 83**

Take of Compound infusion of gentian..... 5½ ounces;
Sesqui-carbonate of ammonia..... half a drachm;
Tincture of cascarilla..... half an ounce.
Mix.

This is particularly useful as a tonic is gout, indigestion and general weakness, whether or not accompanied with morbid acidity in the stomach and symptoms of red gravel. The dose is three table-spoonfuls, repeated twice a day.

Tonic Mixture **No. 84**

Take of Decoction of Peruvian bark..... 6 ounces;
Tincture of bark..... 2 drachms;
Muriatic acid..... 40 drops.
Mix.

An excellent tonic in typhus and the low stages of all fevers, in doses of three table-spoonfuls every two, three or four hours.

An Excellent Steel Mixture **No. 84A**

Take of Citrate of iron, sesquicarbonate of
ammonia, of each..... 2 scruples;
Water, to make eight ounces,
Tincture of orange peel..... 2 drachms.
Mix them.

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The dose is two table-spoonfuls twice a day, in two table-spoonfuls of water. It is an admirable warm tonic, very useful when the patient has a blanched complexion, denoting a deficiency of good blood. It is one of the most pleasant, effectual and blood producing medicines that can be taken.

Tonic Ammonia Mixture **No. 84B**

Take of Sesqui carbonate of ammonia..... 2½ scruples;
Decoction of Peruvian bark ..... 7½ ounces;
Compound tincture of bark ..... half an ounce.
Mix them and take three table-spoonfuls three or four times a day.

In putrid sore throat, diphtheria and general debility, this is an admirable remedy; also in rheumatism.

An Excellent Tonic Mixture **No. 85**

Take of Sulphate of quinine..... 8 grains;
Cinnamon and common water, of each ..... 2½ ounces;
Syrup of orange peel ..... 6 drachms;
Tincture of orange peel ..... 2 drachms.
Mix.

This is a most agreeable and useful way of administering quinine. The dose is two table-spoonfuls, twice or thrice a day.

Tonic and Astringent Mixture **No. 85A**

Take of Muriatic acid and nitric acid, of each . 12 drops;
Infusion of rhatany or gentian root ..... 5 ounces;
Tincture of orange peel, syrup of orange peel, of each..... half an ounce.
Mix them.

This is a tonic mixture almost equally pleasant and efficacious. It possesses considerable power as an astringent and will be found

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useful in diarrhoeas and chronic dysentery, when a tonic is admissible. It is beneficial in dyspepsia, and is particularly appropriate if white gravel be a concomitant symptom. The dose of the acids may often be increased to twenty drops. The dose is three table-spoonfuls twice a day.

Mixture for Dysentery and Diarrhoea **No. 85B**

Take of Pomegranate bark ..... 2½ ounces;
Water ..... 1½ pints.
Boil to a pint and strain, then add an ounce of syrup of morphia. Give a wine-glassful every four hours, in dysentery and diarrhoea.

Mixture Foil Dropsy **No. 86**

Take of Acetate of potash ..... 5 drachms;
Infusion of digitalis ..... 1½ ounces ;
Sweet spirits of nitre ..... 3 drachms
Syrup of tolu ..... half an ounce.
Water, sufficient to make up an eight ounce mixture.
Mix them and tale three table-spounfnfs thrice a day.

This is an excellent diuretic in dropsy, especially in dropsy arising from liver obstruction, pleurisy, or any other affection in the chest. It may he given at the same time with a pill of calomel and squills at bed-time.

Diuretic Mixture **No. 87**

Take of Purified nitre ..... 2 drachms;
Mixture of gum ammoniac ..... 6 ounces;
Compound spirit of juniper berries ..... 1½ ounce;
Vinegar of squill ..... 6 drachms.
Mix.

The dose is a table-spoonful in water, every four hours. It is worthy of a trial in most cases of dropsy from disease in the chest.

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Soothing Diaphoretic Mixture — No. 87A

Take of Solution of acetate of ammonia	2	ounces;
Antimonial wine, fresh prepared	2	drachms;
Syrup of orange peel		half an ounce;

Water to complete eight ounces.

Mix and take three or four table-spoonfuls thrice a day.

Dr. Graves's Fever Mixture — No. 87B

Take of Tartarized antimony	3	grains
Tincture of opium		half a drachm;
Mucilage of bum arabic	1	ounce;
Water	5	ounces.

Mix and take a table-spoonful every hour in the beginning, until relieved, then every second hours and after the patient is very sensibly relieved, four or five times in the twenty-four hours.

Dr. Graves, of Dublin, found this combination of eminent and superior efficacy in the delirium of fever and I believe it worthy of all confidence, not only for that particular symptom, but as capable of materially assisting to conduct the disease to a favourable issue. Sometimes the first doses of this mixture will vomit the patient, but that will do no harm and such an effect will soon cease to take place; and in many cases it purges and causes the discharge of a considerable quantity of bilious yellow fluid, affording great relief. Dr. Graves relates cases of its remarkably soothing power in his *Clinical Medicine,* p. 130, 135. One is an example of the worst form of typhus fever, in which there was intense mental excitement, total want of sleep, continued delirium and excessive disturbance of the nerves. This man manifested "continued mental wandering, incessant talking and raving and frequent attempts to get out of bed. He hurl terrific ocular spectra and alarming sounds, which threw him into a state of intense agitation; his eye was red and watchful and he never slept". Yet he was calmed and benefited by this mixture and gradually and completely recovered. It is very efficacious in *delirium tremens.*

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OINTMENTS AND CERATES

Ointments and *Cerates* are compositions of fatty matters, either animal or vegetable, or both, employed as external dressings. They both possess a certain degree of firmness, but ointments are much less firm than cerates. The latter commonly contain a considerable proportion of wax, whence they derive their name.

Spermaceti Ointment — No. 88

Take of Spermaceti	6	drachms;
White wax	2	drachms;
Olive oil	3	ounces.

Melt them together over a slow fire and stir them constantly until they are cold.

Ointment of Nitrate or Mercury — No. 89

Take of Ointment of nitrate of mercury	1	drachm;
Spermaceti cerate	2	drachms.

Mix them.

This is an invaluable composition. It is stimulant and cleansing and is used with the greatest advantage in scald head and other eruptions on that part, in chronic inflammation of the eye and specks on the cornea and in ulcers. In such cases it stimulates the part to a healthy action and will often cure very obstinate examples of these different affections, after other powerful remedies have failed. In scald head and ulcerations, it is either rubbed over the part affected with the finger, or applied spread on linen: and in chronic diseases of the eye, a little is taken on the end of the finger, or on a camel's hair brush, liquefied by the fire and applied along the inner part of the eyelid.

Sulphur Ointment — No. 90

Take of Sublimed sulphur	3	ounces;
Prepared lard		half a pound;

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Essential oil of bergamot ..... 20 drops.
Mix them.

This is specific in itch. It should be rubbed on the body every night till the disease be cured, but not more than one-fourth part of the body should be covered with it at a time.

Ointment of Galls **No. 91**

Take of Galls, in fine powder ..... 2 drachms;
Camphor ..... half a drachms;
Lard ..... 1 ounce.
Mix them.

This is a very useful application to piles, after their inflammatory state has been diminished by the use of Goulard water and leeches.

Very Excellent Lye Ointment **No. 92**

Take of Ointment of nitric oxyde of mercury,
spermaceti ointment, of each ..... 1 drachm;
Mix them.

A little should be applied to the eyelids, night and morning, by means of a feather or camel's hair pencil, as advised for No. 89. It is excellent in all redness and chronic inflammations of the eyes or eyelids; and is similar to the celebrated Singleton's Golden Ointment.

Tartar Emetic Ointment **No. 93**

Take of Tartar emetic, in fine powder ..... 1 drachm;
Spermaccti ointment ..... 7 drachms.
Mix them together.

About the size of a large nut rubbed over any part night and morning, will speedily bring out a crop of pustules, which should be kept discharging by an occasional use of the ointment for a

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fortnight. If the irritation thus excited should be at any time great, it may be allayed by applying a warms bread and water poultice and renewing it, often as agreeable.

Goulard Ointment **No. 94**

Take of Acetate of lead, in powder	2	drachms;
White wax	2	ounces;
Olive oil		half a pint.

Melt the wax in seven fluid ounces of the oil; then add gradually the acetate of lead, separately rubbed down with the remaining oil and stir with a wooden spatula, until they be thoroughly incorporated.

This is an excellent cooling cerate for burns, excoriations and other inflamed sores and for all common purposes. It should be renewed night and morning. It is similar to *Goulard's Cerate* and under that name, or that of *cerate of acetate of lead,* may be purchased at all druggists.

Turner's Cerate **No. 95**

Take of Prepared Calamine, yellow wax, of each....		half a pound;
Olive oil	1	pint.

Mix the oil with the melted wax; then remove the mixture from the fire and as soon as ii begins to thicken, add the calamine, stirring constantly until it be cold.

This is a cooling drying cerate, very useful in excoriations, simple ulcers and burns after the inflammation has abated. *Goulard's Ointment* and *Turner's* Cerate mixed, in equal proportions, form a very efficacious soothing ointment, applicable to most cases of excoriations, ulcerations and erysipelas, met with in domestic practice.

Black Wash **No. 96**

Add one drachm of calomel to a pint of lime water; and shake the bottle every time it is used.

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This is a soothing and favourite application to bad sores and to foul ulcerations of every kind. A piece of fine lint should be dipped in the lotion, laid over the sore and renewed night and morning.

PILLS

Pills are masses of a consistence sufficient to preserve a round form, yet not so hard as to be of too difficult solution in the stomach. This form of preparation is particularly adapted for medicines which have a very nauseous taste or flavour and such as operate in minute doses. Extracts, when not too hard, may be formed into pills without any addition; but more generally, pills are composed of either vegetable, or earthy, or metallic powders, combined by means of syrup, mucilage, or gum arabic, or some bitter extract, into a coherent mass. Pills should never weigh more than five grains each.

Purgative Pills **No. 97**

Take of Compound extract of colocynth,
compound rhubarb pill, of each ..... half a drachm;
Calomel ..... 6 grains;
Oil of carraway ..... 5 drops;
Syrup, a sufficient quantity to form the whole into a mass.
Divide it into sixteen pills.

These are excellent purgative pills, of great service in fevers, inflammation and all cases in which such a purgative is required. They evacuate the intestines through their whole extent and in doses of two or three at bed-time, are pretty certain of procuring some copious evacuations the next day.

One pill, or even half a one, generally operates as a very mild yet effectual aperient, of much benefit in costiveness, low spirits and on all ordinary occasions.

Alterative Pills **No. 98**

Take of Calomel ..... 7 grains;

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Emetic tartar, two grains at first, gradually increased to two grains and a half;
Precipitated sulphuret of antimony ..... 1 scruple;
Guaiacum, in powder..... 2 scruples.
Rub them well together in a mortar for ten minutes, then, with a little conserve of hips, make them into a mass and divide it into twenty pills.

Alterative Pills **No. 98A**

Tale of Calomel ..... 1 grain;
Emetic tartar ..... 1 grain;
Precipitated Sulphuret of antimony ..... 10 grains;
Guaiacum, in powder ..... 1 scruple.

Rub them well together and, with a little confection of hips, divide them into ten pills; one to be taken every other night, or every night.

Alterative Pills **No. 99**

Take of Blue pill ..... 30 grains;
Tartar emetic ..... 2 grains;
Extract of hemlock ..... 3 scruples.
Mix them well together and divide the mass into twenty pills; one of which should be taken every night, or every other night, or under urgent circumstances, twice a day.

These are excellent forms of alterative pills and are of eminent service in almost all chronic disorder. They operate mildly yet effectually in altering the diseased condition of action in the smaller vessels of the circulating system and thus are employed with superior advantage in numerous severe, obstinate and apparently dissimilar complaints. They enjoy the confidence of the majority of the most distinguished members of the medical profession in this country and are prescribed by them, as well to correct a derangement of function, as to check the progress of organic injury. They are of great service in bilious and liver complaints, diseased

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joints, scrophulous and other tumours; chronic diseases of the eye and skin and, indeed, in many other obstinate and protracted maladies. I consider them, without exception, the most valuable mineral alteratives known, being more generally applicable to the relief and cure of chronic disease than any other mineral medicine or combination with which we are at present acquainted. No. 98A is a very mild form and such as I commonly prefer, particularly in the case of delicate persons and in domestic practice.

One pill is given every night, or every other night for several days. If the disease is of an aggravated character, and it is necessary to employ means to check its progress directly, a pill may be administered night and morning, until that object is accomplished and then the quantity should be reduced to one every night, discontinuing the pills for three days occasionally. In very severe diseases, this plan may be perserved in for many consecutive days, or even weeks.

Mild Aperient Pills[1] **No. 100**

Take of Compound extract of colocynth		half a drachm;
Compound rhubarb pill	1	scruple;
Castile soap	10	grains;
Oil of juniper	3	drops.

Beat them into a mass and divide into twelve pills.

These are excellent aperient pills for occasional use in costiveness, bilious affections and on all ordinary occasions. They are suited to the relief and removal of these complaints in children as well as in adults. One pill taken at bed-time is generally sufficient, but some persons may require two.

Mild Aperient Pills **No. 100A**

Take of Blue pill	12	grains;
Precipitated sulphuret of antimony	6	grains;

1. The following is another form of aperient pill at once mild and efficient, and may be useful where neither No. 97 or No. 100 are found suitable:

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Tarter emetic	1	grain;
Compound extract of colocynth	24	grains;
Extract of henbane	12	grains;
Oil of cloves	1	drop.

Mix them together and divide the mass into twelve pills.

The dose is one, two or three every night, or every other night. We have numbered these 100 A. *One pill is usually sufficient, especially in delicate habits.*

Digestive Aperient Pills **No. 101**

Take of socotorine aloes, thirty-six or forty grains; rub it well with eighteen grains of gum mastic; and add of compound extract of gentian, and compound galbanum pill, of each, twenty-four grains; oil of aniseed, a sufficient quantity to make twenty pills.

Take, when costive, two or three of these pills an hour before dinner, or at night. These are stomachic aperient pills, containing an antispasmodic and producing usually a full feculent evacuation. They are very suitable to persons who have no vital energy to spare and require a medicine which will operate mildly, surely and safely.

Stomachic Aperient Pills **No. 101A**

Take of Compound rhubarb pill, (or compound extract of colocynth)	1	drachm:
Ipecacuanha powder	8	grains;
Extract of chamomile	26	grains;
Extract of henbane	24	grains.

Mix them well together and divide the mass into twenty-four pills; of which one, two or three may be taken as a dose, when costive.

Tonic Aperient Pills **No. 101B**

Take of Sulphate of quinine	30	grains;

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Compound rhubarb pill ..... 1 drachm;
Compound extract of colocynth ..... 30 grains;
Oil of aniseed, a sufficient quantity.
Mix them together and divide the whole into thirty pills, of which one or two may be taken as a dose, when costive.

These pills, containing a direct tonic, are often employed with much better effect on the action of the bowels than those which have no invigorating influence. I am quite of opinion, that a tonic should in every case, where it is practicable, be combined with an aperient; more especially when the pills are frequently used.

Deobstruent Aperient Pills **No. 101C**

Take of Powdered gum guaiacum ..... 1 scruple;
Gum ammoniacum, in powder ..... 1 drachm;
Carbonate of ammonia..... 15 grains;
Pill aloes with myrrh ..... 2½ scruples;
Compound tincture of aloes, a sufficient quantity.
Mix them and divide into forty pills. Take three of them, once or twice a day, with or without a little infusion of chamomile.

These pills will be-found of superior utility to many persons who suffer from internal obstruction associated with constipation. Those who are troubled with griping or colicky pains and costiveness, will experience relief from this combination.

Deorstruent Aperient Pills **No. 101D**

Takeof Gum myrrh, gum ammoniacum, of each half a drachm;
Benzoin,..... half a drachm;
Extract of gentian, ... 1 scruple;
Venice turpentine, ... 2 scruples;
Pill aloes with myrrh,..... half a drachm;
Compound tincture of aloes, a sufficient quantity.
Mix them well together and divide the mass into forty pills.
The dose is two pills, once or twice a day.

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I recommend these pills as useful to such invalids as suffer from costiveness and urinary affection, or cough.

Mild Aperient Pills **No. 101E**

Take of Watery extract of aloes	1	drachm;
Leaves of red roses		half a drachm;
Gum mastic		half a drachm;

Simple syrup, a sufficient quantity.

Beat them well together and divide into forty pills,

This is a mild useful aperient pill, operating also as a tonic to the stomach. The dose is two or three pills at bed-time.

Strengthening Pills **No. 102**

Take of Subcarbonate of iron	1½	drachm;
Ipecacuanha, in powder	8	grains;
Aromatic powder	8	grains;
Extract of gentian		half a drachm;
Socotorine aloes, in powder	2	or 3 grains;

Simple syrup, or mucilage of gum arabic, a sufficient quantity to form the whole into a mass of a proper consistence.
Divide it into thirty pills.

Two or three of these pills are to be taken twice a day. They are of great value as a tonic in indigestion, bilious complaints, general weakness, head-ache depending upon a nervous or debilitated state of the constitution, green-sickness and many other complaints where a mild yet effectual strengthening medicine is required.

Strengthening Pills **No. 103**

Take of Sulphate of iron		half a drachm;
Carbonate of potash	10	grains;
Myrrh, in powder	1	drachm;
Compound powder of aloes		half a drachm.

Beat them together and divide the mass into thirty pills.

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These pills are often of the greatest service in green-sickness and retention or suppression of the menses, accompanied with a languid pulse; and also in indigestion, general debility and the advanced stages of pulmonary consumption. Two of them may be taken three times a day.

Bismuth Pills, for Indigestion **No. 103 A**

Take of Oxyde of bismuth ..... 3½ scruples;
Powdered rhubarb ..... 6 grains;
Aromatic powder ..... 1 scruple;
Extract of hips, a sufficient quantity to make them into twenty pills; one to be taken twice a day.

These pills are very efficacious in removing pain *and weight in the stomach,* connected with indigestion.

Stomachic Pills **No. 104**

Take of Rhubarb, in powder ..... 2 scruples;
Ipecacuanha, in powder ..... 10 grains;
Castile soap ..... 2 scruples;
Mucilage of gum arabic, a sufficient quantity to make the whole into a mass.

Divide into twenty-four pills; one to be taken twice or thrice a day.

These are very valuable stomachic pills in indigestion and bilious affections and many complaints which depend on derangement of the important organs of digestion, such as sick headache, frequent nausea, deficient appetite and stomach cough. Their principal operation is on the stomach and first intestine (duodenum) and by exciting a new and healthy action in these organs, they frequently secure a healthy flow of bile and are productive of the most beneficial consequences to the constitution generally.

Another Form of Stomachic Pills **No. 104A**

Take of Powdered rhubarb, powdered ginger, of each ..... half a drachm;

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Extract of gentian, extract of chamomile, of each ..... half a drachm;
Oil of cloves, or aniseed, a sufficient quantity to form the mass.
Divide it into thirty pills, of which one or two may be taken an hour before dinner every day and again in the evening.

Pills Foil Chronic Cough and Asthma **No. 105**

Take of Compound squill pill ..... 1 drachm;
Ipecacuanha, in powder ..... 7 grains.
Mix them well together with a little syrup and divide the mass into twenty pills. One to be taken three, four or five times in the twenty-four hours.

This is a useful stimulating expectorant in all cases of indolent habitual cough and in asthma.

Another Form **No. 106**

Take of Myrrh, in powder ..... 1½ drachm;
Sulphate of zinc ..... 12 grains.
Mix them well together in a mortar and with a sufficient quantity of conserve of roses, make them into a mass. Divide it into twenty-four pills.

This is a stimulating tonic pill, which is sometimes very serviceable in chronic cough and asthma. One or two pills may be taken three times a day.

Pills for Chronic Bronchitis **No. 106A**

Take of Sulphate of zinc ..... 1 scruple;
Extract of hemlock ..... 2 scruples.
Mix them and divide into twenty pills. One to be taken thrice a day.

They are tonic and expectorant and are not liable to produce heat or head-ache as iron sometimes does.

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Pills for Recent Cough **No. 107**

Take of Extract of hemlock, prepared in vacuo 2 scruples;
Ipecacuanha, in powder ..... 10 grains;
Hemlock, in powder, a sufficient quantity to make the whole into a mass.
Divide it into twenty pills. One to be taken twice or thrice a day.

These pills are sometimes of the greatest service in recent cough of almost every description. They promote expectoration, allay fever and relieve irritation and pain in the organs of the chest. They are useful in the hooping-cough, both of children and adults.

Another Form **No. 108**

Take of Extract of hemlock, extract of white poppies, of each ..... 2 scruples;
Ipecacuanha, in powder ..... 10 grains.
Mix them well and divide into thirty pills. One to be taken thrice a day.
This prescription is applicable to the same cases as the last.

Anodyne Diaphoretic Pill **No. 109**

Take of Muriate of morphia..... 1/6 or ½ of a grain;
Camphor ..... 2 grains;
James's powder ..... 2 grains;
Conserve of hips, a sufficient quantity to form a pill.

This is a very useful pill to procure sleep and ease pain, in the majority of diseases. It tends to relax the skin at the same time that it relieves pain. It may be given at bed-time, or twice in the day, according to circumstances.

Anodyne Pills **No. 110**

Take of Compound ipecacuanha powder .... 2 scruples;

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Extract of hemlock, prepared in vacuo .....
(page 147) ..... 1 drachm.
Mix them together and divide into twenty pills.

These pills have in general great power in alleviating pain and irritation in most local complaints. There are very few painful maladies in which they are not both appropriate and useful. Where some anodyne is frequently called for, they are far better than the usual preparations of opium, because they do not affect the head, or distress the constitution, while they often exert more than a palliative effect. One or two pills, twice or thrice a day, is the proper dose.

Sometimes the extract of henbane may be advantageously substituted for the extract of hemlock, if the above combination is not sufficiently anodyne.

Pills to Procure Sleep **No. 111**

Take of Camphor..... 4 grains;
Nitrate of potash ..... 5 grains;
Extract of henbane, prepare in vacuo, 4 grains, (or more);

Syrup of poppies, a sufficient quantity to form the mass into three pills, which may be taken at bed-time.

These are valuable pills for procuring sleep when opium cannot be given with propriety and especially when the patient complains of heat or feverishness at night.

Pills to Acute Inflammation **No. 112**

Take of Calomel ..... 10 grains;
James's powder ..... 15 grains;
Turkey opium, in powder ..... 10 grains;

Conserve a of hips a sufficient quantity to form the ingredients into a mass, which is to be divided into ten pills.

One of these pills may be given in acute inflammation of the lungs, bowels, or any other part, every second, third or fourth hour,

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according to the severity of the symptoms and the urgency of the case. They are of the greatest service in such cases, when joined with the use of the lancet and other proper means and ought never to be neglected when the existing disease is dangerous.

Pills for Acute Bronchitis **No. 112A**

Take of Calomel ..... 10 grains;
Tartarized antimony..... 1 grain;
Dover's powder ..... half a drachm;
Extract of hemlock, a sufficient quantity to mix them.

Divide into ten pills, of which one should be taken every night, or twice or thrice a day.

This is a valuable alterative soothing pill in acute bronchitis and also in dysentery and liver complaints.

Pills for Jaundice **No. 113**

Take of Socotorine aloes, rhubarb, in powder,
and Castile soap, of each ..... 1 drachm;
Oil of juniper ..... 15 drops.
Make them into a mass with a little syrup, or mucilage of gum arabic and divide it into forty pills.

Two of these pills may be taken twice or thrice a day. They are sometimes of great service in jaundice, bilious affections, costiveness and obstructions in the digestive organs.

Pills for Red Gravel **No. 114**

Take of Dried subcarbonate of soda ..... 1 ´ drachm;
Compound powder of cinnamon ..... half a drachm;
Castile soap ..... half a drachm;
Balsam of Peru, a sufficient quantity to form the whole into a mass, to be divided into thirty pills.

Three of these pills may be taken thrice a day, *in red* gravel and stone, with much advantage.

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Anthony White's Gout Pill **No. 114A**

Take of Calomel, acetic extract of colchicum, purified extract of aloes, ipecacuanha powder, of each ..... 6 grains.

Mix them and by means of mucilage of gum arabic, or confection of roses, divide the mass into six pills, of which take one every four or six hours, until they act freely on the bowel and relief of pain is obtained.

This is a suitable and useful pill to take when threatened with gout, or at the commencement of a fit of it. But when it has operated well and relief of pain is obtained, then it should be discontinued and Scudamore's draught of magnesia, Epsom salt, etc., No. 80, p. 182, recommended under Gout, be taken every other morning. This pill of White's is designed to unload the bowels, improve the intestinal and biliary secretions and at the same time to relieve pain and determine to the skin. In all cases, when the pain has been relieved, this hill should be discontinued.

Pills for Ague **No. 115**

Take of sulphate of quinine 1drachm;
Extract of gentian, sufficient to divide it into thirty pills.

One of these pills taken every third, fourth or fifth hour, will prove in general a certain cure for the ague, unless some internal obstruction prevent it. They are also a valuable tonic in many cases of general debility.

Pills for Cardiac Dropsy **No. 116**

Take of Calomel ..... 20 or 30 grains;
Tartar emetic ..... 2 grains;
Compound squill pill ..... 1 drachm;
Opium, in powder ..... 3 grains;
Oil of juniper, a sufficient quantity to make the whole into a mass, which is to be divided into twenty pills.

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The ingredients must be well rubbed together in a mortar before the oil is added.

One pill may be taken in dropsy thrice a day, until the symptoms permanently give way, when they should be taken less frequently. They form an invaluable remedy in every variety of dropsy, not arising from disease of the kidneys.

Plummer's Pills **No. 117**

Take of Calomel ..... 20 grains;
Precipitated sulphuret of antimony ..... 20 grains;
Gum guaiacum, in powder ..... 2 scruples.
Rub them well together in a mortar for ten minutes and, with a little conserve of hips, divide them into twenty pills.

These are valuable alterative pills, first recommended by Dr. Plummer, a respectable physician in Scotland, for the cure of diseased joints, bilious complaints and many other chronic maladies, in which they are certainly an appropriate and efficacious remedy. The dose is one every night.

Diuretic Pills **No. 118**

Take of Blue pill ..... half a drachm;
Squill, in powder ..... 1 scruple;
Conserve of roses, a sufficient quantity to divide them into twenty pills.

One of these pills may be taken every sip hours in dropsy of the belly; and general dropsy, not owing to kidney disease.

Sir H. Halford's Aperient Pills **No. 119**

Take of Blue pill ..... 20 grains;
Compound extract of colocynth ..... 30 grains;
Oil of cloves ..... 2 drops.
Mix and divide into one dozen pills.

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One or two of these pills taken for a dose, every second or third night, or as occasion requires, will act as a mild and effectual aperient. If taken regularly three times a week, for three or four weeks, in such, quantities as keep the bowels gently open without purging, they will frequently prove a valuable alterative medicine of great service in indigestion, bilious and nervous disorders and other chronic maladies.

Pills for Hooping-Cough **No. 119A**

Take of Ipecacuanha powder, rhubarb powder,
of each ..... 12 grains
Extract of hemlock, sufficient to make them into twelve pills.

Take one of them three or four times a day, or the powders may be made into twelve powders and given in jelly.

This is a very useful pill in hooping cough and may be used at all stages of this complaint and in all ages. For infants give only one-fourth the quantity in powder.

POWDERS

This is the simplest form of administering medicines; but those remedies which are very unpleasant to the taste; those which deliquesce rapidly when exposed to the air, or are very volatile and those which require to be given in large doses, or which are not diffused readily in water, cannot with propriety be administered in the form of powder.

Generally speaking, a fine impalpable powder, is preferred for those substances which are exhibited in this form; but Peruvian bark, rhubarb, ipecacuanha and guaiacum, operate more powerfully in the state of coarse powder.

As powders are generally affected by the action of the air and light, they should be kept in opaque or green glass bottles; a practice not sufficiently adhered to either by druggists or apothecaries.

The lighter powders, such as powder of bark, rhubarb, etc. may be taken in any agreeable thin liquor, as tea, or watergruel.

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The more ponderous, such as calomel, antimony and other mineral preparations, will require a more consistent vehicle, as thick syrup, jelly or honey.

Purgative Powder **No. 120**

Take of Calomel ..... 2 grains;
Compound powder of jalap ..... 1 scruple.
Mix them.

This may be taken in gruel or barley water, or treacle. It is a useful purgative for ordinary purposes.

Aperient Powder for Children **No. 121**

Take of Rhubarb, in powder ..... 6 or 8 grains
Super-sulphate of potash ..... 10 grains.
Mix them and give it in a little water.

This is a mild and efficacious aperient for children and adults. It is of great service in the enlarged bellies and bilious disorders of children, to whom it may be given in such cases every other morning, until the disease be overcome. Sir William Fordyce was very partial to its use in the disorders of children and infants; and it would be well if mothers, who are fond of administering calomel to their tender offspring on all ordinary occasions, were to lay it aside for this more mild and suitable formula. *Gregory's Powder* is an excellent aperient for children, given in water.

Gregory's Powder **No. 121A**

Take of Turkey rhubarb, in powder..... 2 drachms;
Calcined magnesia..... 2 drachms;
Ginger, in powder ..... 7 grains;
Cinnamon powder ..... 15 grains.
Mix them well together.

This is very similar to the celebrated Gregory's Powder and is a composition which I would strongly recommend, in the dose of

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half a tea-spoonful, as a useful aperient for ordinary domestic purposes. It is also an excellent aperient in gout.

Worm Powder **No. 122**

Take of Calomel ..... 2 or 3 grains;
Compound powder of scammony ..... 10 grains.
Rub them well together and take it in treacle.

This is an efficacious powder for the expulsion of worms from children and adults and it may be repeated twice a week, or oftener, till the object be accomplished.

Emetic Powder **No. 123**

Take of Ipecacuanha, in powder ..... 15 grains;
Emetic tartar ..... 1 grain.
Mix them.

Proper for adults on ordinary occasions, taken in Water.

Fever Powder **No. 124**

Take of James's powder ..... 4 grains;
Calomel ..... ¼ of a grain;
Compound powder of tragacanth ..... 6 grains.
Mix them.

This is a valuable diaphoretic cooling powder in the commencement of inflammatory and typhus fever, measles, smallpox and other febrile affections, after the stomach and bowels have been emptied by an emetic and purgative.

Diaphoretic Camphor Powder **No. 124A**

The prescription for an excellent diaphoretic powder, which is extensively used in the York County Hospital, is the following :

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Take of Nitrate of potash ..... 4 drachms;
Dover's powder ..... 2 drachms;
Camphor ..... 1 drachm;

The camphor, pounded in the usual manner, is mixed with the other ingredients. The dose is from ten grains to a scruple taken at bed-time in gruel, to produce perspiration and about eight grains to relieve pain.

This powder has long been a favorite remedy with Dr. Simpson, of York; and I would recommend it as a valuable diaphoretic in all cases to which Dover's powder is applicable. In many cases of diarrhoea, dysentery and fever, it will be found more efficacious than even Dover's powder. Whenever pain and irritation in the chest, abdomen, head, or limbs are severe, especially if accompanied with fever, ten grains of this powder in gruel is an admirable remedy. It may be repeated once or twice a day, according to the severity of the pain.

Powder for Rheumatism **No. 125**

Take of Peruvian bark, in powder ..... half a drachm;
Sesqui-carbonate of ammonia ..... 7 grains.
Mix them; to be taken in a wane-glassful of water.

This is often of eminent utility in acute rheumatism, after the exhibition of alkalies and purgatives. It is also sometimes very beneficially employed in chronic rheumatic pains and swellings. It may be repeated thrice a day.

Diuretic Powder **No. 126**

Take of Cream of tartar 1drachm;
Dried squill, in powder 1grains;
Ginger powder ..... 4grains.
Mix then.

Proper in dropsy of the belly and also in general dropsy.

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Astringent Powder **No. 127**

Take of Tormentil rout, in powder	half a drachm, or more.
Ipecacuanha, in powder	1 grain.

Mix them.

This is a mild and effectual astringent, which is beneficially employed in diarrhoea and dysentery and may be repeated after every liquid stool. Unlike the ordinary astringents, it does not prove stimulant; and is, therefore, particularly indicated in the looseness attendant on pulmonary consumption and wherever fever is present. Mix it in a little cinnamon or common water.

Chalk Powder for Diarrhoea **No. 128**

Take of Compound powder of ipecacuanha ..	3 grains;
Compound powder of chalk	1 scruple.

Mix them.

Another astringent powder of great value in looseness and flux. it tends to relax the skin at the same time that it astringes the bowels and is effectually employed to allay pain in such diseases. Take it in cinnamon water, or common water and repeat it after every liquid stool.

Anodyne Diaphoretic Powder **No. 129**

Take of James's powder	3 grains;
Sesqui-carbonate of ammonia	5 grains;
Compound powder of ipecacuanha	8 grains.

Mix them.

This is very useful to allay pain and procure sleep, in gout, rheumatism and in the majority of diseases. It may be taken, in a little jelly and be repeated every four hours, if necessary.

Tonic Powder **No. 130**

Take of peruvian bark, in powder	2 scruples;

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Ipecacuanha, in powder ..... half a grain;
Compound powder of ciunamon ..... 8 grains.
Mix them.

A useful strengthening powder in all cases in which bark is admissible. It is an eligible mode of taking that remedy for the cure of ague.

Saline Soothing Powder **No. 130A**

Take of Cream of tartar ..... 2 scruples;
Sulphate of potash ..... 2 scruples ;
Nitrate of potash ..... 6 grains;
Camphor ..... 3 grains.
Mix theta and take it twice a day, in half a tumblerful of water. It is extremely valuable as a common domestic remedy in feverishness with irritability and costiveness.

Powder for Impurities in the Blood **No. 130B**

Take of Epsom, salt, cream of tartar, precipitated sulphur, of each..... 1 ounce.
Mix them and put them into a wine-bottle, fill it with warm water and shake them well together. Take a wine-glassful every morning fasting.

This is a valuable alterative, of eminent service in all bloody discharges from the stomach, intestines or lungs and also in every kind of eruption on the shin.

PLASTERS

These are solid tenacious compounds, adhesive in the ordinary heat of the body. The base of the majority of plasters is a chemical combination of the semi-vitreous oxide of lead and oil; but some of them owe their consistence to wax and resin and others contain no oily nor fatty matter whatsoever.

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Warm Plaster **No. 131**

Take of Blistering plaster..... 1 part;
Burgundy pitch ..... 14 parts.
Melt them together with a moderate heat and mix them so as to form a plaster.

This plaster is stimulant and creates a slight, irritation on that part of the skin to which it is applied. It is used with advantage in common cough, hooping-cough, sciatica and local pain.

Resolvent Plaster **No. 132**

Take of Purified ammoniac ..... 1 pound;
Purified mercury ..... 3 ounces;
Sulphureted oil, ... 1 fluid drachm.
Rub the mercury with the sulphureted oil until the globules disappear; then add gradually the ammonite previously melted, and mix the whole together.

This is one of the most powerful plasters now known for promoting the absorption of glandular and other herd swellings. It is applicable to almost all hard indolent tumours; but perseverance in its use is absolutely necessary in order to obtain its full effect. It is a useful application to corns and bunion and is sold in the shops ready mixed, under the title of plaster of ammoniac with mercury.

Cumin Plaster **No. 133**

Take of Cumin seeds, carraway seeds, laurel berries, of each..... 3ounces;
Dried pitch..... 3pounds;
Yellow wax ..... 3ounces.
Melt the pitch and the wax together; then add the ether ingredients in powder and mix.

This is a stimulant and discutient plaster, frequently applied to the lower part of the abdomen in flatulence and a cold feeling of the bowels and likewise to indolent tumours.

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Adhesive Plaster **No 134**

Take of Yellow resin ..... half a pound;
Lead plaster ..... 3 pounds;
Melt the lead plaster by a gentle heat, then add the resin in powder and mid.

This is the plaster commonly applied to cuts and to retain together the lips of recent wounds. It is also of very great service in old and indolent ulcers, to which it affords a proper support and thus relieves the sensations of weakness and pain and promotes their healing. In these cases, the plaster spread on calico should be cut into strips of two inches wide and fifteen or sixteen inches long, which are to go completely round the limb and such a number of strips applied as will cover the ulcer or ulcers and an inch or two of the surface both above and below them. They must be applied rather tightly and should be renewed every four or five days. It is sold in the shops ready spread.

Tarratt's Bandage and Strengthening Plaster **No. 134A**

This plaster from the nature of the composition and the material on which it is spread, is adapted for a permanent bandage, as it neither produces irritation of the skin, nor, when applied, does heat cause it to lose its adaptation to the part. Having these qualities, it is peculiarly valuable in the treatment of ulcerated legs, varicose veins, etc., where equal and constant support is required. Several of the most eminent surgeons continue to use this plaster in their practice, preferring it in certain cases to any other. It is well suited for exportation and use in warm climates, the high temperature having less effect on it than on any other plaster.

At Messrs. Westwoods and Hopkins, Wholesale Druggists, New gate-street, the plaster may be had in packets containing three yards, for 2s. 6d., or spread upon skins of chamois leather, at 3s. 6d.

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Anodyne Plaster **No. 135**

Take of hard opium, powdered ..... half an ounce;
Resin of spruce fir, powdered ..... 3 ounces;
Lead plaster ..... 1 pound.
Melt the plaster and the resin together, then add the opium and mix the whole.

This plaster has some effect in relieving rheumatic and other local pains, in different parts of the body.

Plaster for Cough **No. 136**

Take of Castile soap ..... 1 ounce ;
Lead plaster ..... 2 drachms;
Sal ammoniac, finely powdered, ...
half a drachm or a drachm.
Melt the soap and lead plaster together and when the mixture is nearly cold, add the sal ammoniac.

This is to be spread on leather and applied to the chest immediately after it is spread. It must be renewed every twenty-four hours, otherwise the intention is lost.

It is sometimes of much service in hooping-cough, asthmatic; and consumptive coughs, etc., and is certainly superior to a plaster of Burgundy pitch.

Blistering Plaster **No. 137**

A blistering plaster requires to remain applied for eight hours at least and sometimes longer, to raise a perfect blister; it is then to be removed, the vesicles are to be cut at the most depending part and without removing the skin, the blistered part is to be dressed with simple cerate, or spermaceti ointment, spread on lint; and the whole skin allowed to remain until a new one is formed under it, when it peels off and the whole is healed in the course of a few days. The application of blisters, however, is sometimes attended with strangury and bloody urine, which arises from the active

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principles of the insect being absorbed and irritating the kidneys and urinary passage. This effect is very much increased if the blister be applied over an abraded surface; and it also occurs if the plaster remain too long applied. These unpleasant effects are most effectually obviated by the patient drinking freely of diluting drinks, such as compound barley water, linseed tea and emulsion of gum arabic and by fomenting the blistered part with warm milk and water, after the removal of the plaster. When we intend to blister the head, it should be shaved ten or twelve hours before the plaster is applied.

Mr. Garden, of Oxford Street, prepares an *Acetum Lyttoe,* which is a liquid, a little of which, laid on the part to be blistered by means of a camel-hair pencil, readily raises a blister. This is a very clean and convenient method of blistering.

In some diseases of irritation, particularly in children, the blistered part, instead of healing kindly, becomes a spreading sore; the true skin is destroyed and the part cannot be healed until the irritability of habit which induced this unpleasant state is allayed. In such cases, a warm bread and milk poultice should be applied, the denuded surface being frequently bathed with tepid milk and water; while at the same time Peruvian bark is internally administered.

In children, especially if young, let the blister remain on only four hours; then cover it with thin tissue paper and it will subsequently rise without any risk being incurred of excessive irritation, or use one of the next blisters.

Albespeyres' Blister **No. 137A**

Albespeyres' Blister, applied with the black side, which is adhesive, to the skin, produces a blister in six or eight hours whilst the usual blaster frequently requires twenty-four hours.

It is sold by Warrick Brothers, 3, Garlick-hill, London.

Brown's Blistering Tissue **No. 137B**

Brown's Blistering Tissue, prepared from pure cantharides, is an

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elegant preparation, vesicating in much less time than the common blistering plaster, easily applied and removed and will not produce strangury or troublesome after-sores. It has received the sanction and commendation of many of the most eminent practitioners in the kingdom.

Brown's Tissue Dressing is an elegant, economical and cleanly substitute for all ointments as a dressing for blisters, burns, etc. and may be called a companion to the above.

It is sold by all Wholesale and Retail Druggists and Medicine Agents throughout the British Empire.

Strengthening Plaster **No. 138**

Take of Litharge plaster	24	parts;
White resin	6	parts;
Yellow wax, olive oil, of each	3	parts;
Red oxide of iron	8	parts.

Rub the red oxide of iron with the oil and adding the other ingredients melted, mix the whole well together.

This plaster is applied with advantage in cases of muscular relaxation and weakness of the joints from sprains, bruises or other causes.

Corn Plaster **No. 139**

Take of Purified ammoniac, yellow wax, of each	2	ounces;
Acetate of copper	6	drachms.

Melt the two first ingredients together and after removing them from the fire, add the verdigris just before they grow cold.

Spread the plaster on some soft leather, or a piece of linen; very carefully pare away as much of the corn with a knife as may be done, before the plaster is applied, which must be renewed in a fortnight, if the corn be not at that time gone. Mr. Samuel Cooper, in his Surgical *Dictionary,* states this to be "infallible."

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SYRUPS

Syrups seldom possess much activity as medicines and are chiefly employed to render more active remedies palatable. I shall, therefore, notice only three or four that are most useful in domestic practice.

Simple Syrup is made by boiling two pounds and a half of refined sugar in a pint of water, until the sugar is perfectly dissolved, when it should be set aside for twenty-four hours, the scum then removed and the clear syrup poured off. It is used to sweeten various remedies.

Syrup of Opium, of a superior kind, may be made by mixing twenty drops of Battley's Sedative Liquor of Opium with an ounce of simple syrup. This is a useful anodyne for allaying the irritation which keeps up the cough in recent cold, after the inflammatory symptoms are abated and for easing pain and procuring sleep, in the diseases of children and delicate women. It is also of great service in some forms of chronic asthma and habitual cough. To allay the irritation of coughing in adults, the dose is one or two tea-spoonfuls taken occasionally; and to procure sleep or ease pain, one or two table-spoonfuls, or more. One third or fourth of these quantities is sufficient for children.

Syrup of Senna is made by allowing two ounces of senna leaves, and an ounce of fennel seeds bruised, to digest in a pint of boiling water for twelve hours; then strain the liquor, mix with it three ounces of manna and a pound of refined sugar and boil them to a proper consistence.

This is a useful and convenient purgative for children, in doses of three tea-spoonfuls. A still more valuable aperient, both for adults and children, is *Smith's Essence of Senna,* sold by all druggists.

Cough Syrup **No. 139A**

Take of Oxymel of squills	1	ounce;
Ipecacuanha wine	1	drachm;
Syrup of roses		half an ounce.

Mix. One or two tea-spoonfuls when cough is troublesome.

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TINCTURES

Tinctures are spirituous solutions of such of the principles of vegetable and animal substances as are soluble in rectified or proof spirit of wine. Rectified spirit is required in a very few instances only for the formation of tinctures, proof spirit, which is rectified spirit reduced in strength by the addition of water, being adequate for almost every purpose. They are prepared by macerating the ingredients in the spirit in a temperature not exceeding 80 degrees, at which degree, by allowing the menstruum to remain on the ingredients for a sufficient length of time, all the principles that can prove useful in the tincture are extracted and the solvent saturated. The ingredients must be dried and reduced to a coarse powder and the maceration made in close vessels and assisted by frequent agitation. When completely made, tinctures should not be allowed to remain upon the ingredients, but be filtered through bibulous paper and kept in this state in well-corked bottles.

Ethereal Tincture of Aloes — No. 140

Take of Socotorine aloes, myrrh, of each in powder ..... 1½ ounce;
English saffron, cut ..... 1 ounce;
Sulphuric ether, with alcohol ..... 1 pint.

Digest the myrrh with the ether for four days in a closed bottle; then add the saffron and the aloes. Digest again for four days and when the dregs have subsided, pour off the tincture.

This is a warm and grateful stomachic and purgative and is beneficially employed in indigestion, bilious affections, jaundice, gout, green-sickness and other cases in which aloes are indicated. The ethereal spirit with which it is made renders it very grateful and peculiarly useful in the above disorders when attended with spasm. In doses of a drachm twice or thrice a day, in any agreeable vehicle, it acts chiefly as a stomachic and mild aperient; but purges briskly in larger doses.

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COMPOUND TINCTURE OF BENJAMIN

See **Friar's Balsam**

Compound Tincture of Bark — No. 141

Take of Lance-leaved Peruvian bark, powdered	2	ounces;
Dried orange peel	1½	ounce;
Virginian snake-root, bruised	3	drachms;
Saffron	1	drachm ;
Cochineal, in powder	2	scruples;
Proof spirit	20	flind ounces.

Macerate for fourteen days and filter.

This is the same as the celebrated tincture of Dr. Huxham and is a grateful stomachic and febrifuge. It is of great service in ague and low nervous fever. The dose is from one to three drachms, every two, three or four hours. It may be taken in water, or any other convenient vehicle.

Aromatic Tincture — No. 142

Is composed of cinnamon bark, cardamom seeds, long pepper, ginger root and proof spirit.

It is a warm aromatic tincture, which is beneficially employed in flatulencies, languor and gout when it attacks the stomach or chest and as an adjunct to bitter and tonic mixtures. The dose is from one to two tea-spoonfuls, taken in any agreeable vehicle. It is sold in the shops under the name *of Compound Tincture of Cinnamon.*

Bitter Tincture — No. 143

Take of Gentian root, cut	2	ounces;
Orange peel, dried	1	ounce;
Cardamom seeds, bruised		half an ounce;
Proof spirit	2	pints.

Macerate for fourteen days and filter.

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This is a valuable stomachic bitter acid cordial, of great use in indigestion, bilious complaints and general weakness. The dose is the same as that of the last tincture. It is the *Compound Tincture of Gentian* of the London Pharmacopoeia.

Tincture for Rheumatism **No. 144**

Take of Guaiacum, in powder	4	ounces;
Aromatic spirit of ammonia	1½	pint.

Macerate for fourteen days and filter.

This is a stimulating sudorific and alterative and is of service in chronic rheumatism and at the termination of the acute species of this disease. It is also of much use in some cases of retention of the menses and difficult and painful menstruation. In all these complaints, it is given in doses of one or two tea-spoonfuls, twice or thrice a day, taken in the form of draught, when it must be first rubbed with a little yolk of egg, or mucilage of gum arabic and the necessary quantity of water afterwards added. It is tile Ammoniuted Tincture of Guaiacum of the shops.

Nervous Tincture **No. 145**

Take of Valerian root	4	ounces:
Aromatic spirit of ammonia	2	pints.

Macerate for fourteen days and filter.

This is the *Amoniated Tincture of Valerian* of the Pharmacopoeia, and is a very useful medicine in all nervous complaints, as languor, depression of spirits and hysterics. The dose is one or two tea-spoonfuls occasionally, taken in milk and water.

Warm Purgative Tincture **No. 146**

Take of Senna leaves	3	ounce;
Carraway seeds, bruised	3	drachms;
Cardamom seeds, bruised	1	drachm;

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Raisins, stoned ..... 4 ounces;
Best brandy ..... 2 pints.
Macerate for fourteen mays in a gentle heat and filter.

This is quite equal to the celebrated *Daffy's Elixir* and is similar to the tincture of senna of the shops. It is stomachic and purgative and is very beneficially employed in flatulency, pains in the bowels, gouty habits, and as an opening medicine for those whose bowels have been weakened by intemperance.

The dose is from one to two or three tea-spoonfuls in water, or any agreeable vehicle.

Astringent Tincture **No. 147**

Take of Extract of catechu ..... 3 ounces;
Cinnamon bark, bruised ..... 2 ounces;
Proof spirit ..... 2 pints.
Macerate for fourteen days and filter through paper.

This is a grateful warm astringent, useful in chronic looseness and flux and all cases in which astringents are indicated.

The dose is from one to two tea-spoonfuls, taken in water, or the chalk mixture of the Pharmacopoeia.

Tincture of Rhubarb **No. 148**

Take of Rhubarb root, sliced ..... 2 ounces;
Cardamom seeds, bruised ..... 1½ ounce;
Saffron ..... 2 drachms;
Proof spirit ..... 2 pints.
Macerate for fourteen days in a gentle heat and filter.

Equal quantities of this tincture and that of senna, or the ethereal tincture of aloes, in the dose of a table-spoonful in water, form a warm stomachic and aperient of great service in indigestion and lowness of spirits, in delicate and enervated habits. This combination is far better than the tincture of rhubarb alone.

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Strengthening Tincture for the Weak and Nervous **No. 149**

Take of Compound tincture of bark ..... 2 ounces;
Ammoniated tincture of valerian ..... 1 ounce;
Ethereal tincture, or compound
tineture of aloes ..... half an ounce.
Mix them.

This is a valuable stomachic and strengthening medicine for general debility, lowness of spirits and nervous irritability. One or two tea-spoonfuls should be taken twice or thrice a day, in milk and water.

Tincture for the Tooth-Ache **No. 150**

Take of Compound tincture of Benjamin and
Battley's solution of opium, of each ..... half an ounce.
Mix them.

A little of this mixture dropped on cotton and applied to the hollow and along the hum, of a decayed and painful tooth, will afford great and sometimes effectual, relief.

WATERS BY INFUSION

Compound Alum Water **No. 151**

Take of Alum, sulphate of zinc, of each ..... half an ounce;
Boiling water ..... 2 pints.
Dissolve the alum and sulphate of zinc together in the water, then filter the solution.

This is an astringent cleansing solution, which is beneficially employed as an injection in whites and as a lotion for cleansing ulcers and strengthening parts that are relaxed.

GOULARD WATER

See **page 173**

DISTILLED WATERS

Distilled waters have not much power as remedies, but are generally

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employed as elegant vehicles only for the exhibition of more active substances.

Cinnamon Water **No. 152**

Steep one pound of cinnamon bark, bruised, in a gallon and a half of water and one pint of brandy, for two days; and then distil off one gallon.

This is an agreeable aromatic water, possessing much of the fragrance and cordial virtues of the spice.

Peppermint Water **No. 153**

Take of Peppermint leaves ..... 1½ pound;
Water, from a gallon and a half to two gallons.
Draw off by distillation one gallon.

WINES

Wine has long been used as a menstruum for extracting the active parts of medicinal vegetables; and the solutions thus formed have been denominated *Medicated Wines.* They should be kept in very well corked bottles and in a cool situation.

Wine of Colchicum **No. 154**

Digest two ounces of the unbruised seeds of colchicum in two pints of sherry wine, for eight days, then filter through blotting paper.

This is one of the best modes of exhibiting colchicum in goat, rheumatism and other inflammatory diseases. See page 39. The dose is from four to ten or even fifteen drops, taken in any agreeable vehicle; but colchicum is of little value except to relieve pain and then it should be combined with a little Epsom salt.

A table-spoonful is equal to half an ounce, by measure.

A dessert-spoonful is equal to two fluid drachms.

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A ten-spoonful is equal to one fluid drachm.

A large wine-glassful is equal to two fluid ounces; and a small wine-glassful to one fluid ounce and a half.

Every household should contain a graduated four-ounce glass measure and a graduated minim, or drop, glass measure; and also a box of scales and weights.

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MINERAL WATERS

It has been already noticed, that although no natural water is found in a state of absolute purity, yet in general the quantity of foreign matters is not sufficient to give it any, very sensible taste or odour. In some instances, however, these are so considerable and of such a nature as to prevent the water forming a part of the nourishment of animals; in which case it is denominated a *Mineral Water* and can be useful to mankind only in a medicinal point of view.

In the present day, mineral waters are generally arranged into the four following classes. 1. *Saline Purging Waters*; 2. *Chalybeate Waters*; 3. *Sulphureous Waters;* 4. *Acidulous Waters.*

Saline Mineral Waters

The *Saline Mineral Waters* owe their properties altogether to saline compounds; and as they are in the opinion of the present author, more extensively useful than any other land of mineral water, he consider them worthy of the first and chief notice. The saline ingredients which predominate and give their characters to the waters of this class, are chiefly Epsom or Glauber's salt, common salt, muriate of magnesia and carbonate of soda.

The most celebrated saline purging springs are those of Cheltenham and Leamington, in England; Landrindod Wells, in Wales; Pitcaithly, in Scotland; and Seidlitz, on the Continent. They are employed in diseases which require continued and moderate intestinal evacuations; such as indigestion, bilious and liver complaints, low spirits, jaundice, scrophulous swellings and many anomalous cases of internal obstruction. The bowers of the salts they contain are very much increased and modified by the large quantity of water in which they are exhibited and they, therefore, operate mildly and effectually on the bowels, promoting a considerable discharge from their internal surface and stimulating the whole of the digestive organs to a more healthy action, without inducing debility. At least, though they may purge briskly, yet they never occasion debility, even in constitutions enervated by previous

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disease, if they are suited to the case; and should their use weapon the patient, that circumstance is a sufficient proof that they are unsuitable and ought to be discontinued. In those instances of indigestion and bilious complaints accompanied with constipation and where the stomach retains a good measure of strength, these waters will often be of more service than almost any other remedy; but if there be real and primary debility of the stomach, they will generally do more harm than good. Cutaneous eruptions and nervous disorders frequently originate in disorder and obstruction of the digestive organs, in which case they are also taken with great and sometimes surprising, advantage.

The Cheltenham and Leamington waters require no preparation; but the proper quantity differs in different cases and can, for the most part, be known only by experience. The physicians practising in those towns almost invariably recommend a pint or two of the water to be taken every morning at two draughts, with an interval of half an hour between each, which time the patient is to spend in walking. This is to be continued for a fortnight or three weeks, when the water is directed to be discontinued for about a fortnight and then resumed in the same manner and for the same period as before. This plan will answer in many instances, but some patients will find greater advantage from taking half a pint, or even less, for a month or two without intermission, as in this dose it may be sufficiently active as an aperient, will frequently agree better with the stomach and bowels and prove a more certain and effectual alterative than when taken in larger quantities, with a long interval, as in the first plan. The best time for drinking these waters is in the summer; but there is no reason why a sick man should not take them at any season, if they promise him benefit.

It should never be forgotten by those suffering from obstinate chronic complaints, that diseases slow in their progress go off also very slowly; and that, according to the judicious remark of *celsus,* time is necessary to remove the deep-rooted evils which time has occasioned. Many individuals fail to receive from these waters all the benefit which they are able to afford them, from want of patience and perseverance.

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The waters of *Llandrindod Wells,* near *Builth,* in *Radnorshire,* are of eminent utility in the treatment of chronic disease. They have been found of singular efficacy in liver complaints, paralysis, deranged general health and many other disorders. They are worthy of my strongest recommendation.

The water of Pitcaithly and Seidlitz has very nearly the same effect as that at Cheltenham and Leamington and is consequently useful in the same diseases.

Chalybeate Waters

Chalybeate Waters are so called from a Greek word, signifying iron, the taste of which is very perceptible in them when fresh from the spring, though they lose it on being exposed for solve time to the atmosphere. The reason of this is that the small portion of iron which they contain being kept in solution by *fixed air, or carbonic acid gas,* when this evaporates, the iron sinks to the bottom, forming the fine ochre that lines the channel or water-course. If the iron be in the state of sulphate, however, no sediment falls; and the black colour following the addition of the tincture of nut-galls is produced, even after the water has been boiled and filtered. Iron abounds in almost every part of the earth and there are, therefore, many clralybeates in Great Britain; but the most celebrated are Tunbridge, Brighton and Peterhead. The Spa springs also belong to this class. If I mistake not, the Brighton chalybeate is the strongest in this kingdom, but that of Tunbridge is the most celebrated. There is also a spring of this kind at Cheltenham and at Hartfell, near Moffat, in North Britain.

The water of Tunbridge Wells is found, upon analysis, to differ from that of common springs only by containing in every gallon a grain of iron, suspended by about three table-spoonfuls of fixed air, or carbonic acid gas. Yet its medicinal effects are sometimes very considerable. Through its operation oil the stomach, it gives a gentle stimulus to the relaxed nerves and muscles and contributes to restore their proper tone. It affords great relief in indigestion and other complaints of the stomach, especially when there is real

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debility of that organ; in flatulencies, bilious vomitings, scrophula and other consequences either of debility or intem-perance. It promotes the circulation of the blood and the various secretions, but more particularly that of urine; and this latter circumstance is one of the best proofs of its agreeing with the habit of the patient. In short, its natural tendency in the cases to which its stimulant and tonic powers are adapted, is to raise the spirits and increase the general vigour of the functions.

The Tunbridge waters are eminently serviceable in the disorders peculiar to females, arising from great weakness or derangement of the uterine system; such as an immoderate flow of the *menses*, green sickness, whites and other similar indispo-sitions, which are not only relaxing and painful in themselves, but are often the causes of abortion, or of sterility. If, however, the profuse flow of the *menses* occur in strong, full habits and is accompanied by feverish symptoms, pain in the back and local irritation, the stimulus of the waters will most likely prove injurious. Indeed, in all cases of disease, chalybeate waters, are for the most part, adapted to the care only of such as occur in delicate persons, of a thin habit and pale complexion, they being very generally improper in all inflammatory cases.

In all obstructions of the urinary passages and other complaints of that region, as seminal weakness, mucous discharges, etc., these waters are frequently found of singular efficacy; and they may he prescribed with great probability of success in such chronic disorders as arise from slow beginnings and are attended with great laxity and weakness of the solids, but without much organic disease.

Some caution is necessary in using these waters. Persons of rather a full habit should take one or two active purges before commencing with the chalybeate water; and when the stomach is foul, either a purgative or an emetic should be previously exhibited. What the immediate effect of the waters may be, can only be known by a trial. They often purge very briskly at first, but this effect soon ceases; and as their continued use has some tendency to occasion costiveness, gentle opening medicines from time to time are necessary. Sometimes giddiness, a heaviness of the head,

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nausea, vomiting, or a sense of fulness over the whole body, will be felt on beginning the course; but they will disappear after a short time. It is only when they stubbornly continue, that they should be regarded as a proof that the waters are not suited to the nature of the complaint, or to the patient's constitution. The nausea, or sickness being often occasioned by the coldness of the fresh-drawn water, acting on an empty, or a very weak and irritable stomach, it is advisable, in the first instance, not to drink it fasting, till the stomach becomes gradually reconciled to it; and in case of extreme irritability, it is a common and judicious practice at Tunbridge, to immerse in hot water a bottle filled with the chalybeate and well corked, that the chilliness may be diminished with as little evaporation of the fixed air as possible.

As all the spa waters are chalybeate, they are of coarse useful in the same diseases as those at Tunbridge and should be taken in the same manner.

Sulphureous Waters

Sulphureous Waters derive their character chiefly from sulphureted hydrogen gas; which in some of them is uncombined, while is others it is united with lime or an alkali. They are transparent, when newly drawn from the spring and have the foetid odour of rotten eggs, which is gradually lost from exposure to the air and the water becomes turbid. They generally contain muriate of magnesia, or other saline matters, which modify their powers as a remedy.

The most important sulphureous springs in this island are those of Harrowgate Kilburn and Moffat; on the Continent, Aix-la-Chapelle and Barege.

They are resorted to chiefly for the cure of cutaneous eruptions, chronic rheumatism, scrophulous obstructions, hypo-chondriasis or low spirits, costiveness and piles. But being a powerful, yet mild alterative, they are frequently of the greatest service in every kind of internal obstruction and chronic disease, since they gently move the bowels, determine to the surface of the body, promote the excretion of urine and strengthen the digestive organs. They

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operate more mildly than the best mercurial alteratives and will frequently cure obstinate chronic maladies, which have resisted the use of mercury.

Those who wish for the cure of any obstinate disease from the use of the Harrowgate, or any other sulphureous water, ought to take it in such a manner as to produce a daily exoneration of the bowels without purging. With this view, a half-pint glass may be drank at bed-time and the same quantity an hour before breakfast and dinner. The dose, however, must vary according to circumstances. Even the quantity just mentioned will purge some persons, in which case it should be lessened, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alterative. In those few cases where the water is intended to purge, in consequence of the patient's complaint requiring a strong determination to the bowels, it may be necessary to drink a pint or two before breakfast.

When they purge, they do not irritate the nerves, or weaken the patient so much as other purgatives. At first, they are very nauseous to the taste, but after a little use they, at least to many persons, become much less so.

During the course of these waters, full, heavy meals and especially hearty suppers, must be carefully avoided. The stimulus of water impregnated with sulphur and salts often increases the desire for food, arid in some pleasure creates a false appetite; but this craving appetite cannot be satisfied without great injury and inconvenience to the patient. The proper diet in these cases is one of a light, nourishing and rather diluting description. Gentle exercise should be taken at the same time, either on foot, or horseback and agreeable company and conversation are highly advisable. Exercise promotes the operation of the waters and carries them through the system; and every thing that tends to exhilarate the spirits, not only increases the efficacy of the waters, but acts as a medicine.

The Harrowgate waters are used externally as well as internally and in this manner are considered a powerful auxiliary in many of the disorders for which they are resorted to, particularly

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in cutaneous eruptions. There are proper baths for this purpose, for the supply of which three springs out of four are devoted; that which is reserved for drinking being more strongly impregnated with salt and sulphur than the rest.

The sulphureous waters at Moffat, in North Britain, are almost as much resorted to as those of Harrowgate, but are not so strongly impregnated. Both these waters are cold, but those of Aix-la-Chapelle and Barege are hot, which in some instances gives them a preference over those of Great Britain. The temperature of the waters of Aix-la-Chapelle is about 130 degrees and their celebrity is Very great and of ancient date. It appears that Charlemagne resided for a long time at Aix and took so much delight in the use of the waters, as frequently to hold lyis levee in the bath, with all his attendants.

Acidulous Waters

Acidulous Waters owe their properties chiefly to carbonic acid. They sparkle when drawn from the spring or when poured into a glass; have an acidulous taste and become vapid when exposed to the air. Besides free carbonic acid, on the presence of which these qualities depend, acidulous waters generally contain also carbonate of soda, of lime, of magnesia and of iron; and sometimes common salt. There are *warm acidulous waters* and *cold acidulous waters;* the temperature of the former, however, does not generally exceed 72 degrees, while that of the latter is about 55 degrees. There is one great exception to this rule, *viz.* the Carlsbad water, which has a temperature of about 160 degrees.

The most celebrated springs of this class are Pyrmont, Seltzer, Spa and Carlsbad. They are tonic and diuretic; and in large doses produce a sensible degree of exhilaration. They all afford a grateful and moderate stimulus to the stomach but the Pyrmont, Spa and Carlsbad, containing carbonate of iron, are especially useful in all cases of impaired digestion; while those which contain alkaline carbonates, as the Carlshbad and Seltzer are more particularly employed as palliatives in red gravel and stone.

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There are other mineral waters in this kingdom which enjoy a considerable share of popularity, such as Bath, Bristol, Matlock and Buxton; but as their virtues depend almost entirely on temperature and they are as much used externally as internally and some of them more so, I shall defer adverting to their internal use till I come to detail their virtues and uses as baths.

MINERAL WATERS *are now so much resorted to, both in our own country and on the continent and are likewise so efficacious in the treatment of diseases, as to render a more extended account of them unnecessary; and since I cannot make every desirable addition to this volume, already sufficiently large, a further consideration of the subject, including a description of the* GERMAN WATERS, *will be found in my book* ON THE DISEASES OF REMALES, *third edition —and of course to all subsequent editions.*

Thwaites's (of Dublin) Mineral Waters are excellent. His Soda Water is unequalled. His town address is 147, Regent Street.

Mineral Waters may now be obtained in a portable and most agreeable form. Savory and Moore, 143, New Bond Street, have prepared in a granular and effervescent condition the constituents of the following mineral springs: Vichy Salt, granulated and effervescent; Carlsbad Salt, granulated and effervescent; Pullna Salt, granulated and effervescent; Seltzer Salt, granulated and effervescent; Fachingen Salt, granulated and effervescent; Kissengen Salt, granulated and effervescent; Marienbad Salt, granulated and effervescent; Cheltenham Salt, granulated and effervescent.

COLD AND WARM BATHING

This important branch of physic is of excellent use and efficacy, both in the prevention and cure of diseases. Though the ancients could less dispense with the use of the bath, an account of the frequency of their athletic exercises, as well as from the want of linen, which was then much less in use than at present, yet in our times it would be of great service if the use of baths was more general and frequent and this beneficial practice not confined to

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particular places or seasons as a mere matter of fashion. Considered as a species of universal domestic remedy, as one which forms the basis of cleanliness, bathing, in its different forms, may be pronounced one of the most extensive and beneficial restorers of health and vigour. And they are often of the greatest service in the cure, as well as in the prevention of diseases. But their utility much depends on a clear and accurate knowledge of the properties and effects of the different baths and on their correct application to the state of the patient's constitution and the nature of his disease; and it will therefore, be necessary for me to notice the two principal classes, *viz.* the *cold* and the *warm* bath, separately.

The sick and valetudinary should remember, that the effects of bathing are not the same in all condition, of the system, but derive their character more from the varying circumstances of the patient, than from any intrinsic properties they may possess, of universal activity. Heat and cold are neither strengthening nor debilitating in themselves, but become so, merely in consequence of certain states of the body at the time of their application. The same application which in a strong person produces increase of strength, may tend immediately to debilitate the feeble; and that which is a stimulant when used with moderation, becomes rapidly destructive to vital power in an excessive dose. The uniformity of temperature in the human body is sustained entirely by the vital powers and the process appears to be carried on with the least expenditure of force, when the atmospheric air indicates sixty degrees. Every material deviation from this point, whether by increase or diminution of temperature, *if long continued,* draws equally upon the constitution and produces relaxation proportionate to the extent and duration of the cause, so that, *in this sense,* both heat and cold are directly debilitating powers to the human constitution. These facts prove that neither the cold nor warm bath should ever be resorted to by those who are in ill health, without the advice of some considerate and able professional man.

Cold Bathing

The sensible properties of the cold bath in general, consist in its

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power of contracting the solid parts of the body, which contraction is followed by a general reaction, indicated by a salutary glow of the whole surface. Any part of the body which is exposed to the sudden contact of cold water, experiences at the same instant a degree of tension and contraction and becomes narrower and smaller. Not only the larger blood-vessels, but likewise the small capillary tubes, are liable to this contraction and subsequent relaxation. The application of cold, when made to suitable habits and proper states of the constitution, is evidently attended with an immediate tonic effect, from the general glow which takes place through the whole body and the accompanying feeling of renewed strength, which indicates an increase of action, of a salutary nature, in all the vessels of the system; and this increased vigour of action is a test of the propriety of the application of cold and explains the manner in which it is beneficial. It shows that the nerves, blood-vessels and all the organs of the body, are excited to a more healthy and energetic performance of their functions; and when this re-action does not take place, the failure is a sufficient proof of such a weakness, or other state of body existing, as precludes the further employment of the cold bath.

Cold bathing is of the greatest service in most disorders originating in, or connected with, simple weakness and relaxation, that is, in debility unaccompanied with any disease of structure or positive injury in any important organ. In the scrophulous complaints and general weakness of children, in the debility and languor following fever, intense study, sedentary occupation, grief, or debauchery, it is often employed with the best effects, since the debility in those cases directly arises, for the most part, from unhealthy habits, depression passions, or the long continuance of a feverish action, when the cautious application of cold proves bracing and very salutary. But in case of positive injury to the structure of some important organ, the employment of cold water is sometimes improper; it may be too great a shock to the system and the diseased part and the patient be then benefited only by the use of warm bathing. Indeed, in complaints which call for the use of the cold bath, it is generally an excellent practice for the patient to commence with tepid bathing, at about 90 or 93 degrees, which

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he may resort to three or four times or more for the first week or two and then try the cold bath. This is particularly advisable where the weakness of the patient is extreme, or the causes of the debility have been a long time in operation.

Whatever may be the disease for which it is resorted to, every cold bath applied to the whole body ought to be of short duration, since all depends upon the first impression the cold makes on the skin and nerves. The head should be always first wetted, either by immersion or by pouring water upon it. The immersion ought always to be sudden, not only because it is less felt than when we enter the water slowly and timorously, but likewise because the effect of the first impression is uniform all over the body and the blood in this manner is not propelled from the lower to the upper parts. Hence the shower bath possesses greater advantages, as it pours the water suddenly upon the whole body and thus in the most perfect manner fulfils the three rules above specified. Gentle exercise ought to precede the cold bath, to produce some re-action of the vascular system on coming out of it, for neither complete rest nor violent exercise are proper, previous to the use of this remedy.

The morning or forenoon is the most proper time for cold bathing; and while in the water the bather should not remain inactive but move about in order to promote the circulation of the blood from the centre of the body to the extremities. After immersion the whole body ought to be wiped quickly with a dry and rough towel and moderate exercise in the open air is proper and indeed necessary.

In the following cases the cold bath is altogether inadmissible : 1. In a general plethora, or full habit of body and in the febrile disposition which attends it. 2. In active haemorrhages, or fluxes of blood, that is, bleedings, attended with a quick, hard, full pulse. and other signs of an inflammatory tendency. 3. In every kind of acute inflammation. 4. In diseases of the breast, difficult breathing and short and dry coughs. 5. In gouty and rheumatic paroxysms. 6. In most diseases of the skin. 7. In a state of pregnancy. 8. In palsy. In liver complaint also it may prove hurtful, if its effects are not

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carefully watched; and wherever it occasions chilliness, loss of appetite, languor, pain of the breast or bowels, or violent head-aches it ought to be discontinued. These unpleasant sensations are the surest proofs, that the actual state of the patient's habit is unfit to bear the shock; and that either the re-action of the heart and arteries is too weak to overcome the cold pressure on the surface, or that tire determination to the head, or some other vital part, is too rapidly increased.

The common method of cold bathing is in the sea, or a river; but in many instances the shower bath, or a free ablution with a sponge, or the roughest towel dipped in the water, merits a decided preference and this is especially the case where there is a determination of the fluids to the head. Although the shower bath does not cover the surface of the body so universally as the usual cold baths, this circumstance is rather favourable than otherwise, for those parts which the water has not touched, feel the impression by sympathy, almost as much as those in actual contact with it. Every drop of water becomes a partial cold bath in miniature and thus a stronger impression is excited than by any other mode of bathing. The shower bath, for the following reasons, possesses advantages superior to most others : 1. The sudden contact of the water, which in the common bath is only momentary, may here be prolonged, repented and modified at pleasure. 2. The head and breast, which are exposed to some inconvenience and danger in the common bath, are here effectually secured, by receiving the first shock of the water; the blood is consequently impelled to the lower parts of the body and the patient feels no obstruction in breathin, or undulations of blood towards the head. 3. The heavy pressure on the body, occasioned by the weight of the water and the free circulation of the blood in the parts touched by it, being, for some tine at least, interrupted, is an unfavourable circumstance in certain instances. The shower bath, on the contrary, descends in single drops, which are at once more stimulating and pleasant than the immersion into cold water and it can be more readily procured and more easily modified and adapted to the circumstances of the patient.

A proper apparatus for giving the shower bath is to be had at

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the tin shops, but where a saving of expense is an object, it may be effectually supplied by the following easy expedient: Fill a common watering pot with cold water, let the patient sit down undressed upon a stool, which may be placed m a large tub; and let the hair, if not cut short, be spread over the shoulders as loosely as possible; then pour the water from the pot over the patient's head, face, neck and shoulders and all parts of the body down to the feet, till the whole has been thoroughly bathed. Let him next be rubbed dry and take exercise, as has been already recom-mended, till the sensation of cold be succeeded by a gentle glow all over him.

When this kind of bath is first resorted to, it may be used gently and with water having some degree of warmth, so as not to make tire shock too great; but as the patient becomes accustomed to it, tire degree of cold may be increased and the water may be allowed to fall from a greater height, so as to make the shower heavier.

A new portable shower bath, called *ombrosome,* has lately been invented, which is extremely convenient and answers well. It may be procured from Howard and Co., of London and is worthy the attention of travellers.

The external use of cold water is often of singular benefit in tire commencement of fever,, in sprains, old swellings and rigidity of particular parts, in which cases it may be applied directly to the affected part and its employment continued for almost any length of time. This subject—*the use of cold water as a remedy .for disease*—has lately attracted the attention of our countrymen and cold water is in my opinion so valuable an auxiliary as to merit a distinct notice at the end of this volume.

Before quitting this subject, I would make a few remarks upon the impropriety of plunging into the cold bath after the body has been greatly heated by exercise. In the earlier stages of exercise, before profuse perspiration has dissipated the heat and fatigue debilitated the living power, the cold bath is generally safe and useful; on the contrary, nothing is more dangerous than for a person to go into the cold bath some time after exercise has produced great perspiration and terminated in languor and fatigue. The reason of this is sufficiently obvious. In the first case, the exercise is short

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of fatigue, being just such as produces an increased action of the vascular system, with some increase of heat and thus secures a force of re-action under the shock with corresponding benefit. In the second instance, where the person waits till he is perfectly cooled and some degree of languor follows as a necessary consequence, the heat is not only sinking rapidly, but the system parts more easily with the portion that remains and on plunging into cold water, a sudden chilliness is felt which is alarming and extremely dangerous. So that were an individual compelled to go into cold water after very active exercise, he had far better go in *when hot* than *when cooling after having been heated.*

Warm Bathing

The cold bath is water at a temperature below 85 degrees; from 85 to 95 degrees is usually called the *tepid* bath and from 95 to 98 degrees it is a warm bath. When the temperature of the water exceeds 98 degrees it is a *hot* bath, which is seldom used above 105 degrees. From 100 to 130 degrees is the *vapour* bath, which degree could not be endured in the condensed state of water.

The tepid and warm baths are sedative. They excite the sensation of heat, lessen the frequency of the pulse, relax powerfully the skin and simple solids, diminish increased excitement and prove very refreshing. The hot bath is stimulant; it augments the action of the heart and arteries, renders the skin red, quickens respiration and produces a copious flow of sweat. The effects of the vapour bath are nearly similar, but it acts with much greater power than water in the liquid form. These effects prove that a *hot* bath would be very improper in any case of acute inflammation; though a *warm* bath might then be very serviceable.

The Tepid Bath

Is applicable to all the diseases to which the cold affusion may be applied and is generally preferred when there is any doubt of the strength being sufficient to re-at, after a cold immersion. It possesses very considerable efficacy in reducing the general excitement and

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in lowering and lessening the frequency of the pulse in fever; it is safe, in a high degree grateful and may be extended to almost the whole class of febrile diseases, such as typhus, scarlet fever; small pox, etc. It is of great service in pregnancy and infancy. In the former case, it induces a pliability of fibre, which by diminishing resistance; lessens the pains and danger and shortens the period of actual parturition. To those women who are liable to tedious and painful labours, it presents a resource equally efficacious and grateful, which should be resorted to for four or five months before the expiration of their time. During the time of puberty, that is, for about two years at that period, sea bathing should be avoided, both in the case of boys and girls' but the tepid bath may then be used with great advantage.

It is often of eminent utility in indigestion, bilious and liver complaints, in the debility brought on by a long residence in a hot climate, in languor and extreme weakness occurring in persons of a delicate habit, for the pains and stiffness accompanying chronic gout or rheumatism and in all cutaneous eruptions. It is likewise usefully employed as an introduction to the use of the cold bath.

The practice of pouring cold water upon the head while the body of the patient is immersed in the tepid bath, is frequently resorted to with manifest benefit in insanity and threatened apoplexy. In the latter disease, cupping and the exhibition of purgative medicine may be beneficially employed with it.

Tepid bathing is particularly indicated in old age, the chilliness, stiffness and debility of which state, it is well calculated to lessen and remove. Franklin, Darwin and other eminent philosophers, speak in high terms of the benefit they received in their advancing years, from the frequent use of the tepid bath.

The best time of using it is in the morning, any time between ten and one o'clock and gentle exercise should be taken afterwards. In general, the period of immersion should not be less than twenty minutes, nor exceed one hour.

The Warm Bath

Is efficaciously employed in acute rheumatism, inflammation of

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the abdominal viscera, of the kidneys, bladder and womb; in suppression of urine and in the convulsions and other spasmodic diseases of infants, arising from teething and other irritations. It may also be applied with safety and efficacy in most diseases of the skin; in green-sickness; in slight cases of palsy; in Saint Vitus's dance and other spasmodic and convulsive affections, where the cold bath might prove too violent; in costiveness, intestinal obstruction and other complaints of the bowels that seem to depend on an irregular or diminished action of any part of the alimentary canal; and in cases of debility attended with nervous irritation. In all cases in which the constitution is injured and a general state of debility induced either by mercury, previous illness, intemperance, late hours, irregularity in diet or exercise, warm bathing is found to produce considerable advantage, when pursued under proper restrictions; and sometimes, in such instances, it is continued for a considerable time with great benefit; at other times, it is properly employed as a preparation for the cold bath. Delicate, weakly and nervous women, who may have suffered from miscarriages and the long train of complaints consequent to such accidents, as sexual weakness, attended with pain in the back and loins, etc., will sometimes fully realize their expectations of relief from warm bathing.

When the warm bath is intended to produce increased perspiration, it is best employed in the evening, when the immersion should not exceed ten minutes and the patient be removed from the bath to a warm bed. When it is not intended to excite perspiration, any time from an hour after breakfast till dinner, will be proper: in these cases, the bathing may be protracted to fifteen or twenty minutes, according to the feelings of the patient. Gentle exercise in the open air should afterwards be employed.

The Vapour Bath

Is recommended in the same diseases as the warm bath and will sometimes succeed in producing the effects wished for, after warm bathing has failed. In using the vapour bath, the power of heat is modified and tempered by the moisture diffused through the air;

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and as the elastic vapour, like air, is a less powerful conductor of heat than a watery fluid, the effect of vapour in raising the temperature of the body is much less than that of the hot bath. Its immediate effects are to excite or increase the action of the superficial arteries, by which the determination of blood to the deeper seated parts is diminished. Therefore, the utility of this application is obvious in all cases of internal inflammation, since it draws a great quantity of blood to the surface and relieves the internal parts by the secretion of the skin, which is one mode nature takes to resolve inflammations and fevers. These effects render it of great advantage in inflammatory fevers, inflammation of the bowels stomach, etc., liver complaints, dropsy, obstinate rheumatic attacks, scrophulous and glandular swellings, gravel, palsy and gout. The vapour bath may be applied to the whole body, or to any part of it.

The best time for using it is the morning, or before dinner. From ten to fifteen minutes is generally sufficient time for the patient to be exposed to the vapour; but there may be cases where half an hour or an hour will be necessary. After the body is properly dried and rubbed, the cool air is perfectly safe. *A portable vapour bath.* I have described in my appendix on the cold water system, at the end of this volume.

The Air-pump Vapour Bath

Must not be lost sight of in this place. It consists of an apparatus capable of conveying vapour to a diseased limb, to which apparatus an air-pump is firmly attached for the purpose of exhausting the machine, when the fumigation has continued the proper time. This air-pump vapour bath has been found of signal service in gout, rheumatism, palsy, contractions of the muscles, cutaneous diseases and other complaints of a chronic kind, in many instances of which it evinces a remarkable power in altering the condition of action in the vessels and nerves of the affected part and in so arousing its impaired energies as to prove of great assistance in restoring it to a healthy state. That it must possess a very considerable power in many obstinate diseases, is, I think, evident from the fact that it

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combines the effect of the most efficacious fomentation and dry cupping; for it conveys the soothing vapour to the diseased part and retains it there, of a uniform temperature, as long as is necessary and then, by exhausting the air, removes all pressure from the surface, so as to occasion a temporary expansion of the vessels, thus affordin an apportunity and assistance to the resolution of obstructions. This will appear more clear, when we consider that the pressure of the air on the body is very great, being equal to about fifteen pounds weight on every square inch of surface[1] and the temporary removal of this enormous pressure from a diseased limb, cannot but prove an effectual means in numerous instances, of promoting a renewed and vigorous circulation, of resolving obstructions, loosening contractions and relieving pain in the part to which the apparatus is applied.

The Turkish Bath

Is now puffed off by some people, but it is a violent and, consequently, sometimes a dangerous thing and only fit for those who have a strong pulse and considerable vigour. Those who are most benefited by cold bathing will not find it agree with them and it should never be taken but under the sanction of an experienced medical man.

The Hot Baths and the Tepid Baths of Bristol, Matlock and Buxton

The *Bath Waters* are very efficacious in strengthening the bowels

1. It is a generally received opinion among philosophers, that the total amount of pressure on the whole surface of an ordinary man's body is equal to 32,000 pounds. This enormous pressure would crush us instantly, were it not exactly counter-balanced by the spring of the air, or other elastic fluid from within, diffused through every part of our bodies; just as the pressure on the surface of a shrivelled apple, is accurately counterpoised by the elasticity of the air contained in its pores. Now this is proved by experiment, for if a shrivelled apple be placed under the receiver of an air pump, we find that as the air is exhausted, the wrinkles on the apple gradually disappear and its surface becomes plump and turgid. These facts serve to illustrate the mode of operation and the utility of the air-pump vapour bath.

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and stomach, bracing the related fibres and invigorating the circulation. In bilious disorders they are by some persons considered specific; and certainly prove serviceable in many nervous, paralytic, rheumatic and gouty complaints. They are attended with good effects in the green-sickness, particularly before any considerable affection of the stomach takes place, or any feverish symptoms appear; in obstructions of the viscera, when the consequences of ague or of long residence in hot climates, if the disorder in these instances has not advanced too far; in colic, especially the painter's or Devonshire colic; in jaundice, when arising from simple obstruction of the biliary ducts; in spasmodic affections of the womb and painful menstruation and in many cutaneous, but more especially leprous eruptions. In gouty cases, they are most useful in that stage of the complaint, when the inflammatory symptoms, if any have preceded, have in a good measure abated and a degree of weakness and want of tone in the system begins to take place. They are said to be also serviceable in morbus coxarius, or the hip disease and in white swelling of the knee. Upon the whole, these waters are often a powerful; but, in many instances, a nice remedy and should, therefore, seldom be resorted to without the advice of an able physician; and certainly they are by no means so efficacious a remedy as the MALVERN WATER.

They are unquestionably prejudicial in all scirrhous and other positive diseases in the lungs and abdominal visceras : and they do not appear suited to cases of palsy occurring in persons of a full habit.

The Bath water, when drank fresh from the spring, has, in most persons, the effect of raising and rather accelerating the pulse, increasing the heat and exciting the secretions. The action on the nervous system is felt at the same time, so that the stimulating properties of the water are very diffusive; and what is further remarkable, though these symptoms come on suddenly, yet they often continue much longer than we can suppose them to be excited by the actual presence of the water in the body.

This account of the primary and immediate effects of the water used internally, will enable any patient to judge from his own

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feelings, whether it agree with his constitution or not. If it excite, on being first taken, a pleasant glow in the stomach, followed by an increase of spirits and of appetite, particularly for breakfast and above all, a rapid determination to the kidneys, there is the greatest probability of its proving serviceable. But if it occasion head-ache, thirst and dryness of the tongue; if it sit heavy on the stomach, or produce sickness and do not pass off by urine, or perspiration, it may be fairly concluded that its continuance would do injury, unless these symptoms can be removed.

In their external application, these waters unite all the medicinal advantages of warm baths from about 160 degrees of heat to any inferior degree that may be desired and the permanence and uniformity of their warmth are no unimportant recom-mendations. Some physicians seem to consider that they possess some further powers and specific qualities superior to those of common water of the same temperature and certainly there are many facts to countenance such an opinion. They observe that their action on the nervous system is more stimulating than a common warm bath; that they raise the pulse and heat the body to a higher degree, yet are much less apt to produce a violent perspiration; that they remarkably increase the urinary discharge; and that so far from causing any relaxation or weakness, the bathers are observed to be in general more alert and vigorous and to have a better appetite on the days of bathing than in the interval.

In drinking this water, the safest method is to begin with a glass containing about a quarter of a pint, before breakfast; and to judge from its effects how often it may be repeated, or the quantity increased. If it feel easy, warm and cordial, to the stomach and spirits and excites no pain or sense of fulness in the head or eyes, a second glass of the same size may be taken the same day at noon and this quantity gradually increased to a pint in the day taken at two or three times, as convenience may suit. This is deemed a proper medium for the generality of people, though, in some cases, where the habit is not very irritable, the daily allowance may be augmented to a pint and a half, with safety and benefit. The Cross Bath Water, the temperature of which, when fresh from the spring,

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is 112 degrees, is usually recom-mended at the commencement of a course, especially when there is any affection, of the head, or when any tendency to plethora appears in the system. After some time, the more powerful water of the King's or the hot bath, which is four degrees higher in temperature, may be used; and this change will prevent, in some measure, the disgust which is apt to come on after a long trial of the Bath waters.

No less regard should be paid to the proper use of the bath. A short stay of five or six minutes is most advisable at first; and if this trial produce no symptoms that are disagreeable, but, on the contrary, seem to improve the health, spirits and strength, a longer stay may be gradually indulged in, till it comes to half an hour, but never so long as to cause lassitude, faintness, or disgust. The choice of the baths is often a matter of importance, as there is still a greater variation in the temperature of the waters when in the baths than at the pumps, the waters in the King's or the Hot Bath, being from eight to twelve degrees warmer than those in the Cross Bath. There are also private baths of any temperature, to suit the peculiarities of every patient's habit or complaint. The best time in general for bathing is the morning; and it may be repeated twice or thrice a week.

The Hot-well Water, near Bristol. Of the four principal warm waters naturally produced in England, this is the least so, excepting that of Matlock, the temperature not exceeding 74 degrees. As the Bath waters are proper where the secretions are defective, so the Bristol water is of service were they exceed the requirements of health. The Bath water warms; the Bristol cools. The former helps the stomach, intestines and nerves; the latter favours the lungs, kidney and bladder. The diseases in which this water is useful, are internal bleedings, immoderate flow of the menses, spitting of blood, dysentery, consumption, gravel and stone, scrophula and diabetes, in the last of which it is sometimes of eminent utility and may be drank as freely as the thirst requires it. It is well adapted to relieve the various symptoms of diabetes; such as the constant thirst, the impeded respiration, the dryness and frequent desquamation of the skin, the feverish quickness of the pulse and the preternatural

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discharge of urine. A regular course of the Hot-well water has been found to moderate this almost unquenchable thirst; to keep the skin moist and perspirable; to allay the fever; and to render the urinary organs fitter to receive benefit from the medicines usually prescribed to remove their debility and that of the system in general. In many cases, a little gentle aperient medicine may be used at the same time, if the bowels are not moved without.

A few years since this water was in high reputation for curing the incipient symptoms of consumption and affording considerable relief in the more advanced stages of this malady; but latterly it has been much less thought of. It is, however, agreeable to the palate and the effects it produces are very gradual and somewhat pleasant and, therefore, it will sometimes be of use to the consumptive and is not likely ever to be injurious.

This water is not made use of to bathe in, only being used internally. The hotter months are the best for taking it; and the full dose is half a pint, which is to be drank early in the morning and repeated before breakfast, at the interval of at least half an hour, spent in gentle exercise. Two more doses of the like quantity and with the like interposition of active amusement, are to be taken between breakfast and dinner, at the longest distance from each of these meals. But particular habits and complaints require variations in the quantity to be taken of this, as well as of any other mineral water. This water is also used at table and for domestic purposes, but in consequence of its altered temperature and of the loss of the fixed air it contained, it cannot be in so high a state of medicinal perfection as when drunk fresh from the spring.

The Bristol and Matlock waters are nearly of the same qualities.

The Buxton Water has a temperature of about 82 degrees and is highly and justly esteemed for its excellent effects in indigestion, low spirits and every kind of weakness and disorder in the digestive organs; and in many complaints which originate in the derangement of the functions of these very important parts, such as gravel and stone, flatulency, what are called bilious disorders, gout, chronic rheumatism and some cutaneous eruptions. It is also beneficially employed in diabetes, bloody urine, contractions of the vessels

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and limbs, especially from rheumatism and old age and painful affections of the kidneys and bladder. In all these maladies, it is employed both internally and externally.

This water has a sweet and pleasant taste; and contains calcareous earth, together with a small quantity of sea salt and no inconsiderable portion of a purging salt. It warms the stomach and intestines, relieves the sensations of pain, sinking and oppression, so common in deranged states of these organs, determines to the surface of the body and creates a comfortable glow through the whole frame. Whatever may be the disease for which it is used, it is generally advisable to keep the bowels regularly open by means of some gentle medicine, if the water does not produce a laxative effect, which it sometimes will without the aid of medicine and which is always salutary. The dose is about a pint taken at two or three draughts, before breakfast and the like quantity before dinner in the same manner.

The Buxton bath is well suited to languid, enfeebled and irritable habits, as the slight shock which follows immersion is almost immediately succeeded by a pleasant glow all over the body. It may be used in the morning, three or four times a week.

DIET[1]

All food is either of animal or vegetable origin. The former is, no doubt, more allied to our nature and most easily assimilated to our nourishment; the latter, though digested with more difficulty, is the foundation of the former, as vegetables are the nourishment of animals and all food is, therefore, properly derived from this source. In many respects, however, vegetable and animal food differ and this difference it is proper to remark, according to the various effects it displays on different parts of the human system. The first

1. The subject of Diet and Regimen is a very important one and therefore, I have been desirous of compressing into these pages as much valuable information relating thereto as possible; but as the space here allowed for these articles is necessarily limited, I beg to refer the reader, who is seeking for a more detailed account of the subject, to my small Treatise, entitled *"Best Methods of Improving Health by Regulating the Diet anal Regimen."*

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difference to be observed between vegetable and animal food, is with respect to their effects on the stomach and bowels. In the stomach, vegetable food always displays a tendency to acescency, while animal food, on the contrary, tends towards putrefaction. Hence the former is apt to produce symptoms of uneasiness, while the latter, in moderate quantity, is almost never felt. In the same way, facility of solution belongs to vegetable food; while from greater firmness of texture and viscidity, animal food is a much longer time under the action of the digestive organs. The latter does not always mix easily in the stomach with other matter; while vegetables unite readily, but frequently continue long on the stomach for want of a proper stimulus. Effects sitnilar to what take place in the stomach are also produced in the bowels by these different kinds of food. The acescency of vegetable food is at all times apt to induce looseness; while the same effect is never known to arise from animal food, except in a very advanced state of putrefaction.

° The combination of a vegetable and animal diet appears to me best suited to preserve a perfect state of health and strength. There are few who subsist entirely on vegetables and of these few, the constitutions have generally inferior stamina. In hot climates, a vegetable diet may be carried to a great extent without injury; while, on the other hand, some northern nations live almost entirely on animal food and in very cold atmosphere, this may be indulged beyond what would otherwise be safe for the health of the body, So that a mixture of vegetable and animal nourishment appears best fitted for the health of mankind in general.

In the consumption of food we are liable to commit errors, both as to its quantity and quality. The error in the quantity, however, is generally the most detrimental. A small portion of food can be better digested and more easily changed into chyle, or that alimentary fluid from which the blood derives its origin, than a large portion, which injures the coats of the stomach and prevents them from exerting their full force. Hence, every excess is injurious. It is in infancy and early age, that the foundation is laid of many diseases arising from indigestion, which are now found in every family. If children are fed immoderately and beyond the real wants

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of nature, the digestive organs become too much distended and the stomach by degrees acquires an unnatural craving for food, which must be satisfied whatever be the consequence. These excessive supplies are not only unnecessary, but produce the most serious and fatal disorders. It should never be forgotten, that we are not nourished, as Mr. Abernethy was wont to say, by what we eat, but by what we digest. Nature is easily satisfied and is usually best provided when we do not intrude upon her more than a small and moderate quantity of the most digestible animal and vegetable food, at regular intervals of four hours through the day.

In regard to the quantity of food to be actually taken, it should be observed that this must be regulated entirely by the appetite, the supply required and the state of health of the individual. The appetite is, in general, the great indication of health; and where the stomach is in a healthy state, it relishes almost every kind of ordinary nourishment that is presented. This being the case, we are to be regulated in a great measure in the quantity taken, by the appetite, a due regard being paid to the supply necessary and the state of the system as it respects health or disease. Satiety is the natural consequence of repletion and before this takes place, the stomach itself gives the alarm. The strong, robust and active, require a larger quantity of food than the weakly, delicate and sedentary; infants need less than children and children than adults; and the aged ought to lessen their quantity of solid aliment in proportion to their age and the strength of their digestive functions. Women, in general, call for much less food than men; and all persons should take a smaller quantity in the relaxing days of summer, than during the cold of winter. It may be remarked, also, as a general rule, liable but to few exceptions, that the quantity of food taken should be much less in a state of disease than in health and this applies equally to acute and chronic diseases. Disease and weakness are necessary and invariable concomitants and it is a common and dangerous error among patients to suppose, that by increasing the quantity of their food, they shall augment their strength and become better able to throw off their diseases; for the reverse is the truth. In all bodily complaints the digestive organs are much affected and in the majority they are chiefly and primarily concerned; they are,

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therefore, fur the most part, in a state of considerable irritation and debility and by increasing the quantity of food, beyond the small supply which they can bear with ease, this irritation is strengthened and with it the existing malady. On the contrary, by carefully regulating our supplies of aliment under such circumstances, we adopt a principal means of lessening irritation in the stomach and intestines and likewise in the particular part of the body diseased; and thus nature is assisted in her efforts to restore the frame to health and the medicines made use of are capable of exerting their full effect. This is a fact worthy of great attention from patients, convalescent from any severe disease; since a small excess in the quantity of food taken at this period, will often bring back the disease with an aggravated force and is, perhaps, the most frequent cause of relapse.

There are three kinds of appetite; 1st : The *natural* or *healthy* appetite, which is stimulated and satisfied with the most simple dish, as certainly as with the most palatable, 2nd. The *artificial* appetite, or that excited by stomachic elixirs, liqueurs, pickles, high-seasoned dishes, wine, etc. and which remains only, so long as the operation of these stimulants continues, 3rd. The *habitual* appetite, or that by which persons enjoying no considerable stamina accustom themselves to take food at stated hours, but frequently without relishing it. The *true* and *healthy* appetite alone can ascertain the quantity of aliment proper for the individual. If we were seldom to trespass on the due limits of temperance, our natural appetite would be able accurately to determine how much food we may consume with satisfaction and benefit; but the usual physical education of children is now so careless and bad, that we rarely meet with a natural and healthy appetite either among them or adults. If after a meal we feel ourselves refreshed and as cheerful as before it, or more so, we may be assured that we have taken no more than a proper quantity; for, if the right measure be exceeded, torpor, heaviness and relaxation are the necessary consequences, our faculty of digestion will be irepaired and a variety of complaints gradually induced. The celebrated *Louis Cornaro* used to speak with delight of the cheerfulness and screnity he felt, after partaking of the small portion of food which he was accustomed to enjoy.

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Before he determined on adopting a spare diet, he was much afflicted with lowness of spirits, heaviness and debility and severe bowel complaints were the torment of his life; but his careful and abstemious diet perfectly cured him of these and other evils. There can be no doubt that the majority of the more respectable inhabitants of Great Britain eat and drink twice as much as is necessary and beneficial; and this is nearly equally true of the same class of persons in most of the other nations of Europe. It is a remarkable fact, that almost all who have lived to a great age, have uniformly observed a very temperate diet and in numerous instances of longevity it has been scanty and coarse.

With respect to the quality of our food, if may be safely said that the flesh of full grown animals is much more digestible and nutritious than that of their young and, as it respects the larger animals, this rule is without an exception. Beef and mutton, for example, are more easily digested and more whole some than veal or lamb; yet it may be proper sometimes to give the preference to the latter in the case of patients who are convalescent from acute diseases, because they are less likely directly to excite heat or feverishness. Even here, however, it will be found, that where the stomach of the patient is very delicate and irritable, a little tender beef oh mutton will produce much less heat and general uneasiness than either veal or lamb, particularly the former. It may also be assumed as a general rule in chronic diseases and in health, that a solid diet is more digestible and better than a fluid one. In acute diseases it is the reverse. All salted meats are with difficulty digested and unwholesome. Generally, speaking, the flesh of tame animals is more wholesome than that of wild animals, the flesh of quadrupeds than birds and that of birds than fishes.

As the quantity of our food ought to vary according to the appetite, the supply required and the state of the health of the individual, so ought the quality. A keen and healthy appetite, calls for a daily supply of animal and other solid food, while the patient with a deficient and capricious appetite will often find a vegetable diet of most advantage. The sedentary and inactive and those whose constitutions ere naturally delicate, do not require such nourishing food as those of a strong robust habit and others who are daily

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engaged in laborious occupations in the open air. Infants need less animal food than children, children than adults, women than men.

It should be remarked that the nourishment conveyed by both animal and vegetable food is much the same, but the animal product is in greater quantity and more easily digested, while the vegetable retains its more watery nature, with a portion of unassimilating saline matter, which though introduced is again expelled by some of the secretions. The animal blood is then richer, more elaborated and stimulating and excites a stronger action of the system, than that produced from vegetables. Both products, however, equally take on an alkalescent nature in the circulation; for the acescency of the vegetable is confined entirely to its action on the stomach and bowels. Thus, from animal food a greater supply of nourishment is received for the wants of the system, depending on its greater quantity of oil, and its longer retention in the body than vegetable food.

It is obvious from these facts, and other considerations which will present themselves to every thinking mind, that in regulating the proportion of animal and vegetable food proper in any given case, attention must be paid to the season, way of life and climate. In summer, the quantity of vegetable food should be always increased, whatever our habits may be; the propriety of this is evidently pointed out by nature, from its abundance at this period. This increase of vegetable food is also the more necessary if the appetite is naturally keen and healthy, as a more strongly nourishing aliment would at this time expose to all the effects of putrescency, which the increase of the vegetable diet will, on the contrary, counteract.

The way of life must also regulate a good deal the proportion of vegetable nourishment. An essential circumstance in the use of all diet is, the production of such a distention of the stomach and bowels as may enable them to act properly on their contents. In the sedentary and inactive, it is particularly desirable that this distention should be produced by food of a less nourishing kind, and that no more nourishment be received than what the wants of the system require. Hence, in these cases, a vegetable diet is often to be

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preferred, while in the active and laborious the plan should be reversed.

The quality and nature of our food should be in a great measure determined by climate, and there is no doubt that the mortality of warm climates is aggravated by the use of too much animal food and strong drink. It is a common practice among Europeans in sultry climes to eat plentifully of either fresh or salt meat, at breakfast, tiffin, and dinner; this practice is followed day after day, and my surprise is, that such a dangerous course of living does not produce a much greater mortality among our countrymen in tropical countries than what actually takes place. A diet of a vegetable and acescent nature, with a large proportion of condiment, such as we find used by the natives of those countries, is best suited to the preservation of health; for by this excess of condiment, the morbid effects on the stomach and bowels, natural to vegetable food, are counteracted, and the chyle formed from it passes into the circulation in a proper state for supporting the body in such a situation. On the other hand, in a colder region, a permanence of nourishment is required, which animal food particularly conveys; and as this nourishment is less apt to disorder the stomach and bowels, no great portion of condiment is necessary, either as a stimulus to the organ, or in order to avoid any hurtful consequences that may arise. The proportion, therefore, of vegetable food is clearly pointed out to be small, and chiefly of the farinaceous or least acescent kind.

After these general observations on diet, we shall take a brief survey of the principal articles employed as food.

ANIMAL FOOD

The animals most commonly killed for the purpose of food are *the common bull and cow, the sheep, the calf, the lamb, the common stag the fallow deer, the domestic boar and sow, the hare and rabbit*, the amphibious animals, *the turtle and frog* and various kinds of birds and fishes.

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The Flesh of the bull

The *flesh of the bull* has a strong disagreeable smell, and is dry, tough, and difficult of solution in the stomach. Bull-beef is rarely eaten. But the flesh of the ox, or castrated animal, called *ox-beef*, is a highly nourishing and wholesome food, readily digested when fresh by healthy persons, and constituting a principal part of the common diet of the inhabitants of this and many other countries. It is the most strengthening of all kinds of animal food, and is almost the only species of such food that is in season throughout the year. ow-beef is not so tender, nor so nourishing, nor so digestible as ox-beef.

Mutton

Mutton is well known to be a highly nutritious and wholesome meat. It appears to be the most digestible of all animal food, and is perhaps more universally used than any other. The flesh of rams has so strong and disagreeable a taste, and is, besides, so exceedingly tough and difficult of digestion, that it is never eaten but by those who cannot afford to purchase mutton of a better quality. *Ewe-mutton*, if it is more than between three or four years old, is likewise tough and coarse. *Wether-mutton,* or the flesh of the castrated animal, is most esteemed, and is by far the sweetest and most digestible.

Veal

Veal is usually considered not at all of a heating nature, and is therefore allowed, perhaps generally by the profession, to patients convalescent from an attack of fever, and to those who have a disposition to bleeding from the lungs or elsewhere, especially with the addition of some acid; but it is in my opinion so very indigestible an article, and has uniformly so strong a tendency to irritate the stomach and intestines, that I wholly prescribe its use wherever persons are not strong and healthy. In all stomach complaints it is peculiarly injurious. The flesh of calves which have been robbed

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of their blood by repeated bleedings, or reared by the hand with milk adulterated with chalk, and confinement in small dark places, so as prevent motion, is unusually depraved.

Lamb

Lamb, being less heating and less dense than mutton, is better suited to persons convalescent from acute diseases, but by the majority of patients labouring under indigestion, or any other severe affection of the stomach, it is not found so digestible as wether-mutton. It is, however, a wholesome food, especially when the lamb is not killed too young, and the fat is rejected. A lamb that has been allowed to suck five or six months is fatter and more muscular, and in every respect better, than one which has been killed when two months old, and before it has had time to attain its proper consistency. *House-lamb* is a dish esteemed chiefly because it is unseasonable. Like all animals raised in an unnatural manner, its flesh is depraved and unwholesome.

The flesh of the *common-stag,* and *fallow-deer,* is well known under the name of *venison,* and is very digestible, wholesome, and nutritious. The common stag should not be killed till he is above four years old, and the flesh is fattest and best flavoured in the month of August.

The flesh of the sow is strong, and makes bad bacon. It is the flesh of the castrated animal that is in common use, and that is known by the name of *pork.* It is a very savoury food, and affords a strong nourishment, suited to persons who lead an active or laborious life; but is not easily digested, nor can it be considered wholesome. The too frequent and long continued use of this meat favours obesity, produces foulness of the stomach and bowels, and occasions disorders of the skin. The flesh of the *sucking pig* is reckoned a great delicacy, and is nourishing, but I cannot think it more wholesome than that of the full grown animal; it is not readily dissolved in the stomach. Bacon is a coarse, heavy, and very indigestible food, only fit to be eaten by the robust, and by labouring people. Those who have an impure state of the fluids, wounds or

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ulcers, or a tendency to cutaneous eruptions, as well as those who are afflicted with indigestion, cough, or consumption, should abstain from the use of pork.

The flesh of the *wild hog* is dense, but sufficiently tender, very nourishing, and more savoury and digestible than that of the domestic hog. It is in season in the month of October. The head is esteemed the finest part, and the flesh of the young animal is reckoned a great delicacy.

The hare and rabbit

The *hare* and *rabbit* are sufficiently wholesome and nutritious. The flesh of the rabbit is softer, more digestible, and less heating than that of the hare; but it is not so nourishing. Wild rabbits are both more digestible and more palatable than such as are domesticated.

The Turtle

The *turtle* is a most nourishing and palatable food, and the esculent frog, though not very nutritious, tastes much like chicken.

BIRDS

Birds, the following species afford excellent nourishment, and are for the most part easily digested, *viz.* the common *fowl pheasant,* and *partridge,* the *turkey, Guinea hen,* and *quail,* the *common pigeon, lark, thrush, blackbird,* and *fieldfare.* The flesh of the young; *rook* is very similar to the *pigeon,* but is rather inferior in flavour and digestibility. The *woodcock,* the *snipe,* the *great plover,* and the *lapwing,* furnish very good and savoury food. The *swan,* the *goose,* the *wigeon,* the *teal,* and the *wild* and *tame duck,* are nourishing and wholesome for occasional food, but they are not very easy of digestion; the *barnacle,* the *puffin,* the *soland goose,* and the *black-backed gull,* are very fat, heavy, and have generally a fishy taste.

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It is very probable that the eggs of all the birds now mentioned, and perhaps of most others, might be employed as food, but custom and convenience have given the preference to those of the common hen, the Guinea hen and the duck. The fluid contents of an egg consist of the white and the yolk. The former very much resembles the lymph of the blood, or the coagulable part of milk. The latter, *viz.* the yolk, is an animal mucilage, composed of oil, coagulable lymph and water. It is miscible with cold water, so as to form an emulsion. The ergs of all granivorous birds, and especially of the domestic fowl, yield a mild, demulcent, and strengthening aliment, well suited to consumptive and delicate persons, and such as are exhausted by immoderate evacuations. When lightly boiled, that is, for not more than three minutes, they are very easily digested; but when boiled hard or fried, they sit heavy on the stomach, and are unwholesome. Raw eggs are gently laxative, and are found to be serviceable in cases of jaundice and obstructions in the digestive organs.

I would here remark, that all broths and soups, and more particularly beef tea, and animal jellies, should invariably be taken with biscuit or bread, which renders them more easily digested, and much more nutritious. No man can subsist on even the strongest beef tea; because the *gelatine,* or jelly, thus taken, is not so nutritious as is generally supposed. If confined to it *alone,* he rapidly emaciates, and would die in a very short time; but if it be mixed with bread, he finds it nourishing.[1]

The wholesomeness of ***fish*** in diet has been much disputed. According to some, it is the most delicious food of any; and, according to others, it is without strength or substance. In the opinion of the present author, it affords, upon the whole, but little nourishment, and is, for the most part. of difficult digestion, and this appears to be the general sentiment of in telligent medical men.[2] Being of all animal substances the most putrescible, it is

1. The reason of this is fully described in my little work before alluded to entitled *Beat Methods of Improving Health.*
2. As a proof how little nutritive substance is to be found in fish, it may be observed that the jockies who, to reduce their weight, *waste themselves* at New market, are not allowed meat, nor even pudding, when fish can be got.

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much inferior in quality to birds, and quadrupeds, and on this account, it seems questionable whether it ought to be allowed to febrile patients, or convalescents from acute diseases. The fat of fish is still more insoluble and indigestible than that of other animals, and readily turns rancid Acid sauces and pickles, calculated to resist putrefaction, render fish somewhat better, and more wholesome for the stomach, while butter has a tendency to impede digestion, and to promote the corruption of its flesh. On the contrary, spice and salt, used in moderate quantities, stimulate the fibres of the stomach, and facilitate the digestive process.[1]

Salt-water fish are the best of any, as their flesh is more solid, more agreeable, and healthy, less exposed to putrescency, and less viscid. They possess these excellent qualities, when fresh; when salted, they have all the properties of salt flesh, and consequently its disadvantages. Those fish which have scales are, in general, the most easily digested, and the best; and of all these the fresh herring appears to deserve the preference. The *herring,* the *whiting,* the *sole*, the *cod-fish*, the *dory,* the *turbot,* and the *flounder,* are perhaps the most digestible and best of fish. *Salmon, mackerel, lobster,* and most other kinds of shell-fish, are very difficult of digestion and unwholesome.

Oysters

Oysters are eaten both raw and dressed; when raw, they are in every respect preferable; for by cooking they are hardened, and deprived of the salt water which promotes their digestion in the stomach. Eaten raw they are nourishing and easily digested, and may be taken with great advantage by the robust as well as by the weak and consumptive. They are also generally attended with a laxative effect, if eaten in any quantity, and are, therefore, well suited as an article of diet for those liable to costiveness. Stewed oysters are particularly indigestible and unwholesome, and should never be eaten by the sick or delicate. They are extremely pernicious

1. Fish and milk ought never to be taken at the same meal, being a particularly indigestible combination.

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to lying-in women, indeed, so much so as to have occasioned death, in more than one or two instances, when given to women in such a situation.

Oysters being a mild and cooling article of food, are of the utmost benefit to those who are troubled with warm flushings of the face, and other feverish symptoms, usually felt in declines, and in nervous and irritable constitutions. It is quite possible, by making them the principal part of a meal, to prevent in a great measure the irritation and heat which produces the hacking and distressing cough, in the more advanced stages of consumption. The great object to be kept in view in the prevention of consumption, is to maintain and increase the tone of the general system, and oysters, and other such mild nourishing food, will lend us powerful assistance in preventing consumption in those who are disposed to it, either from family or personal causes. Only a very small quantity of vinegar should be used by those who eat oysters to prevent consumption; those who take them to cure that disease may advantageously take it more freely, since this, and most other acids, have a favourable effect in subduing hectic fever, and in assisting the efforts of nature to overcome the disease.

As occupying a middle rank between animal and vegetable food, I shall here notice milk and its various products.

MILK

Milk holds a conspicuous place among the articles of nourishment. It is the type of all food. It is the proper and natural food of the young of all animals of the mammalia class; and cow's milk makes a principal part of the daily diet of a great proportion of the human race, both in the infant and adult state. On account of the abundance of oily and cheesy matter which it contains, cow's milk is by no means so well suited to infants as human milk; but as the mode of living in civilized society often depraves the quality of women's milk, or prevents its secretion, cow's milk, in too many instances, becomes a necessary substitute. On such occasions, as it is too heavy to be given alone, it should be diluted with water; and as it is

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disposed to become more acescent than human milk, and from that cause to produce gripings and other disorders of the bowels in young children, it will often be useful to mix with it decoctions of animal substances, such as chicken or veal broth, or decoction of hartshorn shavings; of which last, two ounces should be boiled in a quart of water, over a gentle fire, till the whole is reduced to a pint; when, after it has become cold, it will be of the consistence of a light jelly. This, mixed with about twice its quantity of cow's milk, with the addition of a little sugar, forms for young subjects a proper aliment, approaching nearly to the nature of human milk. Milk-porridge, as well as those puddings composed chiefly of milk and flour, are rather heavy, and difficult of digestion, and therefore not so wholesome as some others. Further information respecting milk will be found in the author's book *On Infancy and Childhood.*

Of course, the quality of milk varies greatly according to the season of the year, the pasture upon which the animal is fed, and the degree of exercise and free air allowed to it. In spring and summer the milk is peculiarly good and wholesome, on account of the salubrious nourishment of the herbs. In winter it is much inferior. Good cow's milk ought to be white, without smell, and so fat, that a drop being allowed to fall on the nail, will not run down in divisions. It is lighter, but contains more watery parts than the milk of sheep and goats; while on the other hand, it is more thick and heavy than the milk of asses and mares, which approaches neares the consistence of human milk.

It is an excellent article of diet both for children and adults, being for the most part easy of digestion and very nutritious. It is used medicinally in consumptions, especially in their early. stage; in gouty affections, after the paroxysm is gone off; in small-pox and measles, especially the malignant kind, diluted with water as the common drink; in cases of strangury and dysury from the absorption of cantharides, etc.; and in many spasmodic and nervous affections, and disorders of the general health.

When milk is used medicinally, it is often serviceable to dilute it with Pyrmont, Seltzer, soda or lime-water. The two last, especially the soda-water, prevent acidity, and make it sit easier on the

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stomach. To obviate costiveness, which milk is apt to induce, it is often proper to mix brown sugar, or magnesia with it, or to boil it with oatmeal or veal broth.

In general, it is improper in inflammatory fevers, unattended with pustular eruptions; in bilious fevers; in scrophulous cases; and in rickets. It seldom agrees with hypochrondriacs, with the plethoric, the phlegmatic, or the corpulent, and disagrees particularly with tipplers, or those addicted to strong liquors.

The following are the principal products and preparations of milk in dietetic and medicinal use, viz., *cream, butter, curds, cheese, whey* and *butter-milk.*

Cream is exceedingly nourishing, and in small quantities sufficiently digestible and wholesome.

Butter, when taken in moderate quantity, spread cold on bread, is very nutritious, and, in general, not difficult of digestion. Melted butter and salt butter are unwholesome.

Curds are not to be recommended. In considerable quantity they are highly oppressive to the stomach.

Cheese may not be, in general, easily digested, though by producing a temporary stimulus in the stomach, it sometimes assists in the digestion of other food. When rich and good, it is nutritious, but is an aliment best suited to such persons as use great and constant exercise. It is sometimes of a constipating nature, and should be sparingly used by those of a costive habit of body. With some persons it disagrees very sensibly, while others find very good cheese as easy of digestion as it is delicious, so that no rule with respect to its use can be given as of universal application; and people must endeavour to find out for themselves whether it agrees, or not. Toasted cheese, though more agreeable to most palates than raw, is very indigestible and unwholesome.

Whey is the watery saccharine part of milk, freed in a great measure from the butyrace and Gaseous matters. It is diluent, and slightly aperient, and diuretic; and is given in consumptions, dysenteries, jaundice, etc. alone or mixed with mineral waters, and sometimes impregnated with the juices of medicinal herbs.

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Butter-milk is milk deprived of its oily matter by churning or agitation. It is nourishing, cooling, and diluent, and is used sometimes with great, advantage in wasting, or a bad habit of body, hectic fever, and consumption. Good butter-milk is frequently of much service, both as an article of diet, and a remedy in pulmonary consumption, particularly in the early states of the florid species, so often met with in the young and blooming.

Milk, cream, butter, oil and cheese belong to the class of heat-forming food, and are unquestionably of importance in maintaining a due temperature of the body, and in promoting its health and strength.

Blanc mange is by no means so proper for patients and delicate persons as is generally supposed. Unless well made, it is apt to disorder the stomach.

VEGETABLE FOOD

The various articles of nourishment we derive from the vegetable kingdom, may with propriety be divided into five orders, *viz.* 1. The different species of farina, or grain, such as *wheat, rye, barley, oats* and *rice;* 2. The legumes, or pulse, such as *peas, beans,* etc.; 3. The various kinds of *salads* and *pot herbs;* 4. Alt the different kinds of *roots;* and 5. *fruits.*

Farinaceous Vegetables

The *farinaceous vegetables* are, of all others, the most wholesome and nourishing, and of these the preference is justly given to wheat. Bread is with much propriety called *the staff of life.* Home-made leavened bread, of a day or two old is extremely easy of digestion, wholesome and nutritious; but we cannot speak in terms so favourable of baker's bread, and new bread of any sort is difficult of digestion and unwholesome. Bread made with good new flour is more palatable than that made with old, but is not so digestible. Rye-flour makes very good bread, and is in common use on the continent.

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Puddings made with flour are, for the most part, wholesome, when taken in moderate quantity, but are not so easy of digestion as bread, or animal food. Perhaps the most indigestible are the hasty, batter and Yorkshire puddings. The *vermicelli* and *macaroni* of the Italians, as well as all the dishes made of flour mixed up into paste, and either boiled in water or stewed in butter are indigestible, and ill calculated for patients and convalescents, to whom they are frequently administered. All unfermented pastry is exceedingly pernicious.

Barley is a very useful and wholesome vegetable. Pearl-barley, well boiled in water, forms a diluting, nutritive drink, of much service to all sick persons.

Oats, when boiled or deprived of the husk, and reduced to groats or meal, are used as a common article of diet for the infirm and sick, in Great Britain, France and Germany. When boiled in water, they impart a thick mucilage, which is very nourishing, wholesome, and digestible. This refers only to the mucilage obtained from genuine groats, or oatmeal, procured from a mealman who can be depended upon; as the oatmeal in common use is too often an impure article, and I fear all *patent prepared groats* and *meal,* as they are called, are adulterated.

Rice is a nutritious and wholesome vegetable. It is easy of digestion when taken in conjunction with some condiment, as cinnamon, nutmeg, all spice, and the like; these additions make it more palatable as well as more wholesome, and obviate its tendency to confine the bowels. It is almost the only food of the, native inhabitants of India—a sufficient proof of its mild, nutritive and wholesome qualities.[1]

All vegetables of the ***pulse*** kind are liable to strong objections, as articles of diet for civilized man. They are very indigestible, heating, productive of great flatulency, and contain little nourishment. Both peas and beans, whether green or dried, oppress the stomach, and are fit to be eaten only by the strong and laborious. Pea-soup is particularly indigestible and unwholesome.

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1. Ale should never be drank after rice and milk, as it is almost certain of producing colic, or some other disorder in the bowels.

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French beans, however, are among the most digestible vegetables our gardens produce. I mean the young, green pod, eaten as it usually is in England.

The best pot-herbs are ***asparagus*** and ***artichokes,*** more especially to those troubled with gravel. Young spring greens and cabbages are very wholesome, but after the spring season they become less digestible. Young brocoli, cauliflower, and spinage, are also nutritious and easy of digestion.

Salads, lettuce, and all undressed vegetables of this kind, contain little nourishment, and are not much to be recommended. Blanched lettuce, being soporific, may sometimes be advantageously used at supper, by those who are frequently distressed by restless nights.

The fourth order of vegetables consists of all the esculent roots, of which the *potatoe,* the *turnip* and the *onion,* are the most wholesome and digestible. We may consider it as an unerring rule, that any kind of aliment for which we feel a natural and permanent appetite is salutary, and conformable to our nature. Of this kind is that valuable root the potatoe, which in the most simple preparation, and without any addition but salt, affords an agreeable and wholesome food to almost every person. It is a light alimentary substance, and can be hurtful only when immoderately used, when not mealy, or when severe indigestion is present. It is very nutritious, and sufficiently easy of digestion; although to a certain class of dyspeptics it is very irritating and pernicious. The arrow-root prepared from potatoes is very good; indeed, it seems that the greater part of that powder sold in England is extracted from the potatoe. The dry mealy sort is the most easy of digestion, and the simplest way of preparing them for the table is the best; mashed potatoes are not so easy of digestion.[1] Turnips are nutritious and wholesome.

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1. The history of the potatoe conveys to us a most instructive lesson, forcibly reminding us of the extraordinary lengths to which prejudice will carry mankind, and showing us by what apparently trivial circumstances this prejudice is often removed, when the most powerful and influential arguments have failed to weaken it. The introduction of this valuable root to the gardens and tables of the people, received, for more than two centuries, an unexampled opposition from vulgar prejudice, which all the philosophy of the age was

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Onions assist digestion, although they cannot be considered very nourishing. They are best suited to persons of a cold and phlegmatic habit, and those whose stomachs require a stimulus. *Parsnips,* when well boiled, are nourishing and wholesome, and so is *Celery.*

Carrots, and especially all kinds of radishes, are rather difficult of digestion and unwholesome.

The best kind of fruits are *apples, pears, gooseberries, raspberries, red and white currants, grapes, peaches, apricots, strawberries,* and *oranges.* Of course they are wholesome only when quite ripe, and of apples and pears the more mellow and tender the fruit the better. *Cherries, plums, olives, cucumbers, melons,* and all kinds of *nuts,* are in general difficult of digestion, and fit only for the strong and active. *Black currants* have a strong tendency to affect the bowels, and are not very wholesome.

DRINK

Drink is indispensable to the solution and digestion of food, and to repair the waste which our fluids are incessantly suffering. Though the season, the state of the weather, cold, heat, the nature of our food, and the greater or less degree of our exercise, require more or less drink at one time than at another, yet we ought to drink only when we are thirsty, and to desist when the thirst is quenched. The

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unable to dissipate, until Louis XV of France wore a bunch of the flower of the potatoe in the midst of his court, on a day of festivity : the people then for the first time obsequiously acknowledged its usefulness, and its cultivation as an article of food soon became universal. Now, its stalk, considered as a textile plant, produces in Austria a cottony flax,—in Sweden, sugar is extracted from its root,—by combustion, its different parts yield a very considerable quantity of potass,—its apples, when ripe, ferment and yield vinegar by exposure, or spirit by distillation,—its tubercles, made into a pulp, are a substitute for soap in bleaching,—cooked by steam, the potatoe is one of the most wholesome and nutritious, and, at the same time, the most economical of all vegetable aliments,—by different manipulations, it furnishes two kinds of flour, a gruel, and a parenchyma, which in times of scarcity may be made into bread, or applied to increase the bulk of bread made from grain,—and its starch is little, if at all, inferior to the Indian arrow-root. Such are the numerous resources which this invaluable plant is calculated to furnish.—*See Paris's Pharmacologia,* vol. 1, page 54.

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more we eat, and the drier our food is, the more we ought to drink in moderation.

The phlegmatic require less drink than the sanguine and choleric, the sedentary than the laborious, and all persons need less in winter than in summer.

To drink immediately before a meal is improper, because the stomach is thereby distended, and the gastric juice diluted, and digestion, consequently, cannot proceed in so favourable and perfect a manner. Hence, to avoid the necessity of drinking, it is advisable not to take violent exercise immediately before dinner. It is also somewhat objectionable to drink much during the time of taking food; as the same consequences *ensue* as from drinking directly before a meal. To take a small quantity of drink at the time of meals is natural and proper, but a large proportion of fluid swallowed at this period renders the stomach incapable of receiving the due portion of aliment, and impedes the digestive process.

Drinks may be divided into common water, animal fluids, animal infusions or decoctions, vegetable infusions or decoctions, and fermented liquors. The first three have been already spoken of, and I shall here only make a few observations on the last heads.

The vegetables employed for infusions or decoctions used as drink, are chiefly tea, coffee, and chocolate.

The annual consumption of *tea* in this kingdom is enormous, being about 80,000,000 lbs. The active principle in tea is called *theine,* and this with a volatile oil and tannic acid are the most important constituents of tea. Physicians now consider that the *theine* and *aromatic oil* of tea not only act as sedatives generally on the nervous system, but also exert a conservative action on the different structures of the body, checking any disposition to too rapid a change in them, and consequent exhaustion. Not only so; but as the daily removal of worn-out materials from the body, through the kidneys and other channels, is essential to health, tea and coffee are regarded as helpful to this process, when taken in moderate quantity.

Tea contains likewise potash, peroxide of iron, soda, and several other salts, which are most important to the human system.

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Liebig, the German chemist, says, "We have, therefore, in tea a beverage contains the active constituents of the most powerful mineral springs".

The great proportion of *theine* and *aromatic oil* will be taken up by the water *first* poured on the tea, and it is of consequence, in order to make good tea that the water should be *boiling* and the teapot of silver, or other metal, first heated with boiling water.

Warm drinks once or twice a day are considered economical and useful to the people generally, and particularly so to the feeble and the aged, as saving an expenditure or loss of heat to the stomach in raising the temperature of the liquid to that of the human body.

Persons occasionally become alarmingly ill from taking *green* tea, then a wine-glassful of brandy, with or without water, is a powerful remedy. *Sal volatile,* or liquid ammonia, in water, may also be given with advantage.

One of the most promising substitutes for tea seems to be *coffee-leaves.* In Sumatra, and other islands of the Eastern Archipelago, the leaves of the coffee-plant are dried and prepared in the same way as those of tea, and used for drink and some of our own countrymen state that their effects are very similar to those of tea.

Tea is well known to have a very marked and irritating effect on the nervous system in some persons, and it is drank in this country far too often and too strong. It forms a refreshing antispasmodic beverage, but should not be taken either strong or very hot; the addition of milk renders it more wholesome, that of sugar less so. Individuals of a rigid and solid fibre are more benefited by it, than those of an opposite habit; but none should take more than two tea-cupfuls morning and evening. I cannot think it equal to cocoa or thin chocolate for common use; and it is very probable that some of our indigenous plants would yield a more wholesome and equally as palatable an infusion as the tea-leaf of China. With some persons no kind of China tea agrees, and then an infusion of agrimony, or some other native plant, should be substituted for it. I may state on very respectable authority, that the first leaves of whortleberry, properly gathered and dried in the shade, cannot be

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distinguished from real teas. *Sage,* (the *Tomentosa* or *Balsamic Sage),* and balm *(Melissa Hortensis* or *Garden Balm),* are likewise excellent substitutes for tea, more particularly in the case of debility in the stomach and nervous system.[1] It is certain that all *green* tea is exceedingly pernicious, having a strong tendency to injure the stomach and bowels, and the whole nervous system. Medicinally, tea is of much service in typhus and bilious fever, cramp of the stomach, flatulency, and to relieve the sensations of oppression and weight at the pit of the stomach, so frequently accompanying indigestion and bilious complaints. It is, however, worthy of particular notice from the dyspeptic, that few things will injure him more than an immoderate indulgence in this or any other warm slop.

Tea being an article of diet of daily and universal consumption, I would beg the reader's attention to the following rules in using it : 1. Carefully avoid the high-priced and high-flavoured teas, more especially if *green,* which generally owe their flavour to pernicious ingredients, and abound most with those active principles, whence the noxious effects of the article arise. 2. Take with it a good proportion of milk, as a corrective to any possible noxious qualities present. 3. Let the quantity of tea used at each infusion be very moderate. 4. Make the infusion properly, with water soft and otherwise of a good quality, and in a boiling state. 5. Tea is a beverage better adapted for the evening than the morning, and therefore less of it should be taken at the latter than the former period. The first meal we take in the morning to recruit the body, after the loss it has sustained during a long fast through the night, and to prepare it for the labours of the succeeding hours of the day, should be in some measure substantial, consisting of a large proportion of solid aliment. Indeed, except when drank soon after a hearty dinner, bread and biscuit should always be taken with tea.

The active principle in *coffee* is called *caffeine,* and it is identical with the *theine* of tea; and since coffee also contains oil, and useful saline matters, we may infer that, like tea, it is beneficial in retarding

1. John Hussey, of Sydenham, in Kent, who lived to 116, took nothing for his breakfast for fifty years, but balm tea, sweetened with honey.

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the waste of the body, and therefore in husbanding the general strength. Those who drink coffee are said to be not liable to gout, and this is attributed to the beneficial influence of the saline constituents of the berry. To many *cofee* is heating, and does not sit so easy on the stomach as tea. The weakly and delicate often find it difficult of digestion, and it is not proper for those troubled with indigestion; yet it is sufficiently wholesome for occasional use. It is most wholesome when made of a moderate strength. Strong Mocha coffee sometimes affords considerable relief in the paroxysm of spasmodic asthma.

Chicory is extensively used in Great Britain as an admixture to coffee, and on the continent of Europe is used verb extensively alone. It contains an oil and bitter principle similar to coffee, and I believe is quite as wholesome.

Chocolate is more nourishing, more wholesome, and less heating than coffee. It is commonly made much too thick, and with too much milk, which renders it oppressive and cloying to the stomach. It is far better when made with water, and rather thin, the milk being added to it when poured out, in the same way that we add it to tea. In this form it is a light, nutritive, and wholesome beverage, well adapted to the nervous, the delicate, and those of a costive habit of body. It is improper for the corpulent, and those disposed to inflammatory diseases or apoplexy.

Cocoa is in fact only a, weak chocolate. It is a light, nutritious, and wholesome drink.

The principal fermented liquors are malt liquors, wine and ardent spirits.

Well fermented malt liquors, whether from barley or other grain, provided they are not too strong, are wholesome, refreshing and strengthening drinks. Formerly, medical men generally dissuaded their patients from taking malt liquor, but since the introduction of the bitter ales of Bass and Allsopp, a revolution of opinion is very evident. Good home-brewed beer,— I do not say public-house beer,—is much more suitable to the condition of people in general, than either wine, or brandy and water. Malt liquors are very nutritious, and are the most useful species of fermented liquors to

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the weak, the lean, and the laborious, provided they are not very subject to flatulency, nor troubled with diseases of the breast. With some sedentary and bilious persons they do not agree so well; and they are improper for the corpulent and asthmatic, and those who are liable to giddiness and other complaints of the head. They are better when of a middle age than when kept very long; and ale, with all the stronger malt liquors, although more nourishing, is also more difficult of digestion, than beer of a middling strength. Beer made from an infusion of malted groats, or malted rye, is lighter and more diuretic than the common barley beer. Spruce beer is a powerful diuretic and antiscorbutic, and is a wholesome beverage for the summer; in winter, it is too cold for some constitutions. Bottled beer is, on account of the fixed air which it contains, more refreshing than the barrelled, but it is not so wholesome. It is frequently prescribed as an antiseptic and restorative in low fevers and convalescencies; but care must be taken during the use of it, that it does not operate too freely by stool. London porter, with the common properties of malt liquor, possesses stomachic and diuretic qualities; but being strongly impregnated with bitters of a narcotic kind, it is by no means so wholesome for daily use as good and pure beer. Owing to this narcotic impregnation, it is very apt to induce drowsiness, and conse quently is improper whenever there is a tendency to head-ache, apoplexy, or other affections of the head. Bass and Allsopp's mild bitter ales are of excellent quality.

Of the use of foreign wine as a medicine; I have already spoken at pages 136-140, and shall now confine the few observations to be made respecting it, to its use as an article of diet. The sweet wines are nourishing, and may sometimes be useful to the weak and convalescent, but they are not so wholesome as the wines in more common use. The acid wines, as the Rhenish and Hock, are the least heating, and the most diuretic, and well calculated for consumption in hot weather. They pass freely by the kidneys, and are gently laxative; but all thin or weak wines, though of an agreeable flavour, yet from their containing little spirit, are readily disposed to become acid in the stomach, and to occasion or increase gravelly complaints, except in cases of *white* gravel, (see the article *Greavel),*

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in which they are in general more useful than any other sort of wine. It ought to be observed, however, that with some delicate persons, the best Rhenish wines agree very well, and are less liable to ferment than many of the stronger wines. The dry and strong wines, such as Sherry, Madeira, and Marsala, and the dry and light, as Burgundy, Claret, and Hermitage, are the most wholesome; they are snore cordial than the acid ones, and can be taken with safety in greater quantities than the sweet. The gentle stypticity, or astringency in genuine claret, renders it in the opinion of many, on the whole, the most wholesome of any strong liquor whatsoever, to be drank plentifully. Port is a strong astringent wine, and, when not mixed with more than a very small portion of brandy, is generous and stomachic, and well suited to the generality of British constitutions, in tolerable health. It is well calculated for cold and moist weather; but, like other red wines is apt to occasion costiveness, which renders it very objectionable to those who are habitually costive, and makes a change to white wine frequently advisable even to those who are not.

Sparkling brisk wines, as Champagne, inebriate more speedily than the stiller wines, but the morbid excitement is of short duration, and the subsequent exhaustion, is comparatively trifling. In feverish habits, Burgundy, Port, and the stronger white wines are to be avoided. To those who have a disposition to corpulence, Claret, Hock or Moselle, on account of their diuretic properties, are preferable to every other kind of wine for daily use.

The moderate use of wine is safe, and often highly beneficial to those who have passed the meridian of life, but to young persons it is almost invariably pernicious. Children in tolerable health are never strengthened, but always injured by it.[1] As a tonic and stomachic to the aged, three or four moderate sized glasses of good wine after dinner ought to be sufficient to most men. Now and then, perhaps, on very particular occasions, in the case of strong persons, half a bottle may be occasionally permitted to persons in

1. For further information respecting the qualities and use of wine, as well as of other points relating to diet in general, see my Treatise entitled "*Best Methods of Improving Health*". A striking proof is there related of the injurious effects attending the use of wine in children in tolerable health.

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health, but to go frequently to that *utmost limit* of rational indulgence cannot fail to shorten life, at least in most instances.

Taken medicinally, in small quantities, *ardent spirits* are a powerful cordial and corroborant, and sometimes prove of much service in cramp or gout of the stomach, chronic spasmodic pains of the bowels, and flatulency. But in their nature, and ordinary effects, they are extremely unfriendly to the human constitution, and should never be taken by those who are desirous of preserving their health, except occasionally as a medicine. When used in any other manner, they stimulate the stomach and neighbouring viscera to an excessive and unnatural action, impair the appetite, impede digestion, and lay the foundation of organic mischief in the most important of the digestive organs; and these effects are as certainly produced by the frequent use of spirits, diluted with water, as when taken pure. A capricious and deficient appetite, head-ache, emaciation of body, lowness of spirits, and disease in the stomach, intestines, or liver, are the common effects of an indulgence in the use of ardent spirits.[1] They are much less detrimental in very cold countries, than in hot or temperate climates. French brandy appears to be the least pernicious; it is the most bracing and stomachic; gin and rum the most diuretic and sudorific. Their qualities are much improved by long keeping.

CONDIMENTS

Condiments are those substances which are taken with our food to promote digestion, or to correct some hurtful property in the food taken. They are usually divided into the saline, saccharine, oleaginous and aromatic.

Of the saline condiments, the principal are common salt and vinegar.

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1. The celebrated John Hunter, on dissecting a man who had been much addicted to the use of spirits, found the blood converted into a kind of oily matter. And it has been proved by experiment, that the pernicious effects of spirits upon horses. are as great as those produced by giving them various well known poisons.

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Common Salt is an article of the first importance to the health and vigour of the body. All animals require it. It facilitates the absorption of water into the system, and, being a compound of chlorine and sodium, it appears to supply to the body a certain quantity of chlorine necessary to the perfection of some of the vital processes. By its stimulant action on the throat, gullet, and stomach, it promotes the secretion of saliva and of the gastric juice, and thereby facilitates digestion. It is a natural and necessary stimulant to the digestive functions, and its daily use conduces much to the preservation of health and strength. It is not generally taken so freely as it ought to be by infants and children, for its use is essential to a healthy condition of the blood.

Vinegar, in small quantities, is a grateful and salutary stimulus to the stomach, correcting the putrescency of animal food, and the flatulency of vegetable. Its use is improper in many valetudinary cases, especially for gouty persons, and those troubled with red gravel, or costiveness; in green-sickness; and for rickety patients and young children. It is very useful to those troubled with white gravel.

Pickles are merely vegetable receptacles for vinegar, but the vegetable being hardened by the acid, renders it somewhat difficult of digestion, and, therefore, pickles are not much to be recommended. The pickled onion seems to be among the most wholesome of this sort of condiment.

Sugar is nutritious, antiseptic, and laxative. In moderate quantities, it is wholesome, but being very fermentable, is apt in some constitutions, to produce flatulency, heat and thirst. Rickety children, chlorotic girls, hysterical women, and all who are troubled with acidity and weakness in the stomach and bowels, should use it sparingly; and those who are anxious to preserve their teeth white and sound, should not make free with it.

The oleaginous condiments consist merely of olive oil and butter.

Oil, when used as a seasoning to raw vegetables, checks their fermentation in the stomach, and thereby prevents them from proving too flatulent. Used in this manner, in small quantities, it

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proves a help to digestion; and is certainly very nutritious. It seldom, however, agrees with weak stomachs for in such cases, even in its mildest state, it easily generates a rancid acrimony, extremely injurious to digestion. In consumptive cases it should be taken freely.

Of ***butter*** I have already spoken at page 243.

The aromatic condiments consist chiefly of the foreign spices, as pepper, Cayenne pepper, cinnamon, nutmeg, cloves, ginger, and of a few garden roots and seeds, such as garlic, union, horse-radish and mustard.

Most of these are wholesome, when taken in small quantities, with food of a flatulent or cold nature, and by persons who require a gentle stimulus. All the varieties of pepper as well as cloves, garlic and onions, are heating and stimulating, and should, therefore, be used sparingly, especially by persons of a full habit, and those disposed to inflammatory diseases. The best aromatic: condiments for frequent use are cinnamon, carraway, ginger, and mustard. Ginger is one of the most agreeable and wholesome spices.

I shall now make a few brief remarks on *Cookery.*

It is certain that simple cookery is a useful art. By it our food is rendered more palatable and digestible, and more conducive to health. It includes the following modes of dressing meat : 1. Roasting 2. Broiling 3. Boiling 4. Stewing 5. Frying 6. Baking.

Roasting was certainly the first mode invented to prepare animal food; for boiling is a more complicated process, and required the art of manufacturing vessels that could withstand the effect of heat. It is an excellent method of rendering food wholesome and nourishing, as, without greatly changing the chemical properties of meat, it renders it more tender, sapid, and highly flavoured, whilst there is not so much dissipation of its nutritive juices as in baking, boiling and some other processes. It is important to observe, that unless meat be kept after it is killed till the fibres begin to lose their firmness and tension, it will not become tender by roasting. The perfection of roasting consists in *doing* the meat neither too slowly, so as to wither it, nor too rapidly, so as to burn it. A small joint is best roasted on a string, by means of the bottle-jack; a large

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joint requires the spit. Our meat in England is generally overdone, and particularly over-roasted. In regard to over-roasting, the action of fire, if continued too long, has a tendency to change mild animal flesh into something of another quality: the fat, in particular, becomes bitter and rancid. The process is carried far enough when the steam of the meat puffs out in jets towards the fire, as this steam comes from the interior of the joint, and makes its way through the brown crust.

Broiling is an excellent mode of dressing animal food. It is a slight variation of the process of roasting, and though it may appear to differ but little, there is a very considerable difference of effect. In roasting and baking, it requires some time to form an incrustation on the surface of meat; but in broiling, the quick application of a brisk heat very speedily frees the outside fibres from their watery juices, and a crisp coating of fibre and fat is soon produced. This crust produces a strong barrier against the escape of the juices from the interior, which are more suddenly expanded than in the slower process of roasting, and, of course, must produce a more vioent separation of the small fibres from their several bundles. These effects, however, are chiefly mechanical, for there does not appear to be the same chemical union of the several substances as is observed in roasting; and it is found, that broiled meat contains more uncoagulated albumen, gelatine, and other uncombined chemical principles, than if it had been either roasted or boiled. It is this that renders broiled meat more juicy, and sapid than when roasted, and it must also make it more wholesome and nutritious. For restoring the strength of invalids it is the best mode in which animal food can be dressed, both from its nutritive qualities, and from its being easily digested, as the juices are so slightly altered, that they require little preparation to convert them into good chyle and healthy blood.

Boiling is also a useful mode of preparing some kinds of animal food, rendering it more soluble, without destroying, if properly done, its nutritive qualities. Some professional men seem to consider it a method of cooking peculiarly calculated for weak stomachs, but this certainly is a mistake; for, in general, boiled

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meat is neither so easy of digestion, nor so nutritious, as that prepared by either of the two foregoing processes. Boiled beef is inferior to roast, in every point of view, and boiled mutton, though a milder food, especially for invalids, cannot be considered so wholesome as when roasted. Boiling is not at all calculated for game, turkey, nor for any young and tender meat.

Boiling is, however, particularly applicable to vegetables, rendering them more soluble in the stomach, and depriving them of a considerable quantity of air, so injurious to those of weak digestive powers. Very striking and unexpected effects are sometimes produced from the boiling of vegetables, as in the case of several plants which are very acrid, and even poisonous, in a raw state, becoming bland, sweet and wholesome, by simply boiling them in water. The potatoe is a familiar example, being, in its raw state, nauseous and unpalatable, perhaps even in a slight degree poisonous, as it is one of the night shades *(solanum tuberosum),* but, when dressed, it is rendered farinaceous, digestible, and wholesome. A more striking instance still is the cassava, *(jatropha manihot)* of America, which is strongly poisonous before it is boiled, and afterwards so highly nutritious. The prepared cassava is well known in this country under the name of tapioca, and forms the basis of an excellent and nutritive farinaceous pudding.

Stewing has a similar effect to boiling, in depriving the meat of much of its best juices, and other nourishing properties, which are washed out of the fibres by the constant entrance and recess of the water during the process. Stowed meat is also still less easy of digestion than that which is boiled, and, therefore, it is a mode of cooking that cannot be recommended as fit for frequent use, although it may be useful on certain occasions.

Frying is one of the worst modes of cookery, as it cannot be performed without the use of fat or oil, two things which are highly objectionable, and because it renders the meat very indigestible. It injures the digestible and nutritive qualities of vegetables as well as those of animal food. Potatoes when fried become waxy in texture, and will often produce derangement, even in healthy and vigorous stomachs.

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Baking is a process to lie preferred to frying, but is not so excellent as either broiling or roasting. It differs from roasting in not permitting the escape of the vapour exhaled from the meat. There is a greater retention of the oleaginous juices of the meat, which are generally in a burnt empyreumatic state, rendering the food less digestible and nutritious. Yet baked meat, when carefully done, is sufficiently wholesome for occasional use.

Beside these various simple modes of preparing animal food, there is another, which it may here be proper to take notice of namely, when animal food is dissolved in water, and formed into a gelatinous solution or jelly. This substance is of a viscid nature, and though it contains much nourishment, yet is not easy of digestion, and of course less calculated for diseased or weak stomachs than is commonly imagined. Nor are those *jellies* which are the mucilaginous extracts of certain parts of animals, as hartshorn, very digestible. They should be taken sparingly, and can only be recommended for the sick, accompanied with a quantity of stale bread.

The above are the principal modes of simple cookery; but the ingenuity of man has been exerted to discover a number of other preparations, which may with great propriety be arranged under the head of refined or compound cookery, a system more flattering to the palate than favourable to the health. As it is impossible to speak of this system with any degree of approbation, I shall merely observe, that the generality of ragouts, made dishes, and the like, are difficult of digestion, and very liable to derange the functions of the stomach and intestines, and, therefore, cannot be too sedulously avoided by those who entertain any anxiety for the preservation of their health.

REGIMEN

The term *Regimen,* strictly speaking, signifies any rule, but in the present work I mean by it chiefly, a proper regulation of the following means of promoting health, *viz.,* 1. Air; 2. Exercise; 3. Sleep; 4. Clothing; and 5. The government of the Passions each of which will be briefly considered.

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AIR

It is an undoubted fact, that though man may live without food even for several days, he can hardly exist for a few moments without breathing atmospheric air, a sufficient proof of its pre-eminent importance, not only to life, but also to health. For breathing does not merely preserve life, but likewise restores the florid colour, stimulus, and, so to speak, the life of the blood, thereby rendering it fit to maintain and increase the general energies of the body, and to repair all its most essential parts. By the same means the natural heat or temperature of the body is kept up, and the substances destructive to health and life are got rid of. These considerations prove that persons who are much confined to the house, must have poorer blood than those who are in the habit of being abroad in the open air; and will, therefore, *coeteris paribus,* be universally found to be weaker in body and mind, more liable to the accession of chronic or acute disease, and less able to struggle effectually under such attacks.

In health, nothing is more essential than for a person to breathe the fresh air at least twice a day, for two or three hours at each time. In large towns or cities, in particular, no day should be suffered to pass over, without enjoying the pure air beyond its boundaries, and that neighbourhood where the air is dry and moderately cold ought to be most frequently visited. Such exposure is the only way of guarding against too much sensibility in regard to the impressions and variations of the weather, one of the most abundant sources of disease, and an evil which is now very generally felt in this country. Invalids should not go abroad too late nor too early. In the winter after eight in the morning, and before four in the afternoon, is the best time; in the summer after six and before eight.

Night air is very unwholesome; and often about sun-set it is particularly injurious, on account of a greater quantity of dew falling at that time than at midnight. In hot countries those who wish to save their life cannot too sedulously avoid the evening and night air.

Infants and young children are much injured by being confined

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within doors, and it is well known that the mortality among them in large towns and cities, owing to the deteriorated state of the atmosphere, is much greater than in the open country. If freely exposed to the outward air, they are found to be little more sensible to the injuries of the weather than young cattle. All school-rooms and nurseries should be spacious, and well ventilated throughout the day. To cover children's faces when they are asleep is a very bad-custom.

In sickness a constant supply of fresh air is extremely valuable. Whatever the nature of the complaint may be, and whether of an acute or chronic character, the patient's apartment should be spacious and freely ventilated. In all fevers it is of the first importance, and in protracted maladies will be found a powerful auxiliary to the other means used for the patient's restoration. In its absence, all other cordials often have but a very partial effect. No sick person should ever sleep with the bed curtains drawn; indeed, this is a most pernicious custom to all delicate persons, and one that, cannot be too soon banished from the houses of all those who value the preservation of health.[1]

Some of the most salubrious and invigorating places in England for invalids are Scarborough, Malvern, Brighton, Llandrindod, the Mumbles, near Swansea, and a little place called Southern Down, near Bridgend. Near London, no place, probably, is equal to Epsom and Banstead for the dryness and invigorating quality of the air. Dorking and Reigate suit some people suffering from chest complaints, who require a mild air.

EXERCISE

Of the means of preserving and promoting health, exercise is, perhaps, that which has hitherto had the least justice done to it by

1. A correct idea may be formed of the injury likely to follow this habit by the following facts. Eighteen charity children, and a servant, slept in an apartment of a house in King Street, Golden Square, when, to render the room warmer, they shut up the chimney, and used every other means to exclude the fresh air; the consequence of which was, that the servant and ten of the children were seized with various alarming symptoms of a disorder nearly similar, accompanied with excruciating pains, convulsions, etc.

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any individual author. Within the last five or six years, indeed, gymnastic exercises have come into frequent use, and have been found very useful, and most people are in a measure aware of some of the advantages of exercise; but the public at large are still far from having attained to any correct and adequate knowledge of its uncommon power, both in preserving health, and assisting in the cure of disease.

The body of man is evidently formed for activity and exertion. By labour or exercise man preserves his health, augments his strength, and improves his mental faculties, besides procuring the means of his subsistence, and the conveniences of life. In regard to health, none of the various processes connected with the important function of digestion could be properly or adequately performed, unless the body were stimulated for that purpose by labour or exercise. The health of all the parts, and the soundness of their structure, depend on perpetual absorption, and perpetual renovation; and exercise, by promoting at once absorption and secretion, invigorates life, without hurrying it; renovates all the parts and organs, and reserves them apt and fit for every office they have to perform. It also mainly contributes to the circulation and purification of the blood, and to the increase of strength.

By this means disease may often be prevented, and not unfrequently cured, even when it has taken a very strong hold of the constitution. It has been justly said, that IF ONLY SOME OF THE MANY ADVANTAGES RESULTING FROM EXERCISE WERE TO BE PROCURED BY ANY ONE MEDICINE, NOTHING IN THE WORLD WOULD BE IN MORE ESTEEM, OR MORE ANXIOUSLY SOUGHT AFTER. Generally speaking a sedentary life is the source of all those diseases which physicians call cachectic or chronic, the number of which is now very considerable. Among these scrophula, indigestion, bilious and liver complaints, lowness of spirits, nervous irritability, and pulmonary consumption, stand foremost, and there may be added to them jaundice, growing out of the shoulder and curved spine, palsy, apoplexy, etc. For these, exercise is one of the most effectual, as well as most agreeable, remedies; it strengthens the vessels, preserves the fluids in a healthy state, augments the appetite,

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facilitates the secretions and excretions, exhilarates the spirits, and, excites pleasing sensations throughout the whole system. I would, therefore, earnestly recommend exercise to the notice of my readers, both as a means of preserving health, and curing disease and deformity.

Exercise is of various kinds, but the principal are *gymnastic exercises, walking, riding, and friction.*

The most useful gymnastic exercises are leaping, throwing the discus or quoit, playing with the foot-ball, and fencing; and it is highly desirable that they should be frequently practised and encouraged to the utmost extent.

There is no exercise so natural to us, or in every respect so conducive to health, as walking. It is the most perfect in which the human body can be employed; for by it every limb is put in motion, and the circulation of the blood is effectually carried on throughout the minutest veins and arteries of the system. The most proper time for walking, and indeed for all exercises, is between breakfast and dinner, and it should then be continued for two or three hours, supposing we rest for a few minutes during that period, so as not to become over-fatigued.

Riding on horseback also is a most useful exercise, more especially for invalids. It has been laid down as a rule, that *riding is the best exercise for regaining health, and walking for retaining it;* and it is a very good one. This rule, however, does not prohibit the invalid from walking daily; but only inculcates that to him horse exercise is preferable in the beginning, as the chief mode of exercising the body.

Friction is a mode of exercise of great value, and highly worthy the attention of all persons, whether in health or labouring under disease; because when more active exercise can be freely taken, it augments its good effects, and may be used locally so as to act beneficially on particular parts, and when active exercise cannot be resorted to friction will be found the best substitute for it, and that which often most effectually paves the way for it. It has great power in strengthening the digestive organs, promoting a free perspiration, resolving obstructions, loosening contractions, and

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imparting a comfortable glove with an increase of energy to the whole system. Thus, it is uniformly of remarkable service to the gouty and rheumatic, to the paralytic, the weakly, and the nervous, in short, to all persons afflicted with any chronic disease, or suffering under a state of general debility. I have known it of great service in promoting sleep; especially in persons enfeebled by literary labours, or close confinement to the house from any cause. If sleep forsakes the invalid, he should rise from bed, and use friction actively all over the body fifteen or twenty minutes, or more.

Friction may be applied to the body by the hand, or with flannel, rough woollen gloves, or the flesh brush. The latter is by far the best instrument, and the proper time for using it is in the morning and evening, continuing it from fifteen to thirty minutes at each time.

Besides the preceding modes of exercise, the use of the shuttlecock anal dumb bells is deserving of much regard. The shuttlecock is a most excellent species of exercise, more particularly for ladies, both young and old, because it can be used almost at all times, and when females may not be able to ride or walk so much as is necessary for health.

SLEEP

Refreshing sleep is universally known to be a powerful restorative, and it should, therefore, be studiously cultivated by all persons. The advantages of sleep are, that by it the exhausted constitution is repaired, and the vital energies restored; the process of assimilation or nourishment goes on more perfectly; perspiration is promoted, and thus much acrid matter is expelled; the vigour of the mental faculties is renewed, and the body attains its proper growth. Such being the salutary effects of this "sweet restorer", we immediately perceive the propriety and value of the late Lord Mansfield's advice to *cultivate sleep;* advice that I wood strongly urge upon every individual, and especially on those who have much bodily or mental labour to undergo.

The number of hours necessary for sleep, varies from six to

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eight in the twenty-four; many strong persons finding six hours sufficient, while the weakly, and the invalid, generally require seven hours and a half or eight hours. It is worthy of particular remark, that even the weakly very seldom require more than nine hours sleep at the utmost, and a longer indulgence will scarcely ever fail to injure them. Half-past ten is the best time to retire to rest at night, and six or half-past six the best hour, in general, for rising in the morning.

In order to insure comfortable sleep, it is necessary that sufficient exercise be taken in the day; the food, particularly in the evening, be moderate in quantity, and easily digested; the bed chamber freely ventilated; the bed clothes moderately light; and the mind free from much disturbance. It is a most pernicious practice to endeavour to stop every crevice in a bed room, so as to exclude the external air; and an this account the curtains of a bedstead ought never to be drawn around it. When persons have their sleep much disturbed, it is often owing to improper management and from being ignorant of the means to be used to promote sleep. These means are various, but it being necessary to confine this volume within a certain size, I am prevented noticing them particularly; the reader will, however, find them fully described in the *"Best Methods of Improving Health, by Diet and Regimen"*. The use of the flesh brush on going to bed, and keeping the body cool, and the feet warm, are grand means of promoting sleep.

Thick heavy quilts should always be avoided, especially by the invalid, as they irritate delicate frames, and prevent sleep. I strongly recommend *Booth and Foxes Patent Down Quilts,* (of 80, Hatton Garden), as excellent coverings for beds.

CLOTHING

Some of the principal rules regarding the use of clothing are : 1. That our garments should be made of soft and pliable materials, so as not to obstruct the free and easy motion of the limbs. 2. They should be made of such a shape as to be comfortable from their ease. 3. They should note warmer than is necessary to preserve

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the body in a proper degree of temperature. 4. The clothes we wear, more especially those next the skin, should be made of substances easily cleaned when necessary. 5. They should be suited to the constitution and age of each individual. Robust and young persons need only a small quantity of clothes, and those of a lighter sort; but the delicate, and especially those who are far advanced in age, require warm clothing. 6. A variety in regard to clothing is necessary, so that it may be adapted to the great difference of temperature in summer and winter. But the weakly ought to be careful not to make too great a change in the summer, more particularly in the evening. Invalids should rarely make such change in this respect till May is out.

The articles used for clothing are chiefly linen, cotton and woollen goods. The different uses of linen and cotton are now generally known; but the proper age and circumstances in which flannel, and other fabrics of wool, ought to be used, are not so well understood by the public. The majority of the most able professional men believe that childhood and old age are the proper periods for the use of this valuable species of clothing; and that to persons of all ages who are afflicted with consumption, or any complaint in the chest, or rheumatism, severe indigestion, diarrhoea, dysentery, colic, or diabetes, it is of essential service. In regard to age, flannel is well adapted to infants and very young children, but of course all extremes in point of quantity must be avoided. The celebrated John Hunter's receipt for rearing healthy children, was, "Plenty of milk, plenty of sleep, and *plenty of flannel*". In later years, the *flannel age* may be said to commence at forty-five or fifty, and after that period, the use of flannel becomes still more and more necessary as age advances. To all aged persons it is of eminent utility.

It is, however, certain that the frequent use of cold water daily to every part of the body, has a very great and sensible effect in so fortifying the skin as to render flannel much less necessary than it otherwise would be. *See* the appendix on COLD WATER.

In respect of disease, or tendency to disease, it is of great value to those afflicted with consumption and severe cough, or asthma,

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or a tendency thereto, and likewise to those who have weak stomachs, or are subject to rheumatism, or are naturally of a delicate constitution. All such persons should wear a flannel shirt or waistcoat, either next the akin, or immediately above the shirt. In the winter, it ought to be worn almost invariably next the skin; but it should generally be thrown off in bed.

The great use of flannel next the skin is, that it promotes the insensible perspiration, and defends the skin against the injuries likely to arise in our climate, from the frequent, great, and sudden changes in the weather.

THE PASSIONS

It is certainly of immense importance, as respects the health of the body, to possess a command over the passions of the mind—those strong emotions occasioned by the view of apprehended good or evil. All physicians agree that the passions, if given way to, have a strong tendency to exhaust the finest of the vital powers; to destroy, in particular, digestion and assimilation; to weaken the vigour of the heart, and the whole nervous system; and, by these means, to impede the important business of renovation. All that I have to say on this subject here, is to put my readers in remembrance of this fact, and to assure them, that a perfect command over the passions may always be gained by due reflection, resolute exertion and earnest prayer. God alone, by His Divine Spirit, can enable us to moderate and govern them perfectly. Fervent prayer and resolute effort, through Jesus Christ, are the ordained means of cure for *"the wild chase of false felicities"*, and the sure road to *"the composed possession of the truth"*; and we may safely assert, with an eminent clergyman of former days, who well understood the way to self command, and to present and future happiness, that *prayer and pains will* here accomplish all things necessary. Let every one earnestly try this prescription, and they will find it infallible.

We cannot be virtuous and possess self-command but in proportion as we become humble, disinterested, trusting everything

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to God, without any unquiet concern about ourselves. A Revelation from the upper world—from the Infinite and Eternal God, demands a deeply reverential hearing, and obedience is always highly productive to *us. "He that is slow to anger is better than the mighty; and he that ruleth his spirit than he that taketh a city"*. Prov. xvi. 32.

"On piety, humanity is built;
An on humanity, much happiness;
And yet still more on piety itself.
A soul in commerce with her God, is heaven;
Feels not the tumults and the shocks of life;
The whirls of passion, and the strokes of heart."

BLOOD-LETTING

Blood is in many respects the most important fluid of the animal frame. From it all the solids are derived and nourished, and all the fluids are secreted; and it is hence the basis or common pabulum of every part. These facts are quite sufficient to convince us, that the abstraction of this important, and, as it ought to be called, living fluid, can never be a matter of indifference to the welfare of the system from which it is taken; whether the system be strong or weak, healthy or diseased, the loss must either be beneficial or injurious, and, therefore, bleeding should not be resorted to on trifling occasions, and never without the advice and sanction of an able professional man. It is far too common a practice for individuals to submit to the loss of blood from the advice of a neighbour, or other ignorant persons, or from some crude notion of their own as to its usefulness and necessity; and even some medical men are much too fond of the use of the lancet, and too indiscriminate in its employment, especially in chronical diseases.

Blood-letting is often proper at the beginning of all acute inflammations, as inflammation of the stomachs lungs, intestines, pleura, kidneys, throat, etc., but it is by no means so much resorted to now as formerly. It may also be necessary when there is too great a quantity of blood in the body: and when some cause

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supervenes, or is threatened in the constitution, which would speedily produce an inflammation, or some other dangerous symptom, if the system was not relieved by this means. It is upon the latter principle that patients are bled after wounds and bruises; that it is directed for a pregnant woman, if she has a violent cough with much feverishness; and, by way of precaution, in several other cases.

Occasionally, acute inflammation supervenes in diseases of debility, or in habits debilitated by grief or previous diseases, when the employment of the lancet is commonly highly injurious; but with the exception of these cases, to determine the presence of inflammation in vital organs, such as the lungs, heart, etc., and the propriety of both general and local blood-letting, is the same thing, at least, in the country. In such cases, the repetition of the bleeding must be regulated by the effects of that which has been employed.

With respect to the quantity of blood taken at each bleeding, in an adult of ordinary vigour, labouring under inflammation of an important organ, fourteen ounces is a moderate general blood-letting; a moderate local blood-letting by leeches or cupping, is from four or six ounces; and both will be the more effectual the earlier they are employed, and the more quickly the blood is taken.

On the contrary, in all cases of debility, bleeding is improper and injurious. Generally speaking, bleeding should never be practised in the following circumstances, unless for some peculiar and very strong reasons, of the due force of which none but skilful medical men can judge: *viz.*

1. In very advanced age, or very early infancy;
2. In persons naturally of a weakly constitution, or who have been rendered delicate by sickness, or some other accident;
3. When the pulse is small, soft, feeble, and intermitting, and the skin pale;
4. When the limbs, and the extreme parts of the body are often cold, puffed up; and soft;
5. When the appetite has been very small for a long time, and the food, consequently, only slightly nourishing;

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6. When the stomach has long been disordered and the digestion bad, whence little blood could be spared;
7. When the patient has been considerably reduced, whether by haemorrhage, looseness, profuse urine or sweat;
8. When the patient has long been afflicted with some depressing disease. In all these cases, and in some others less frequent, a single bleeding often precipitates the patient into an extreme state of debility, and a condition absolutely incurable.

To the consumptive patient, bleeding always proves injurious, by the weakness which it aggravates or occasions.

It was formerly a very common practice to bleed insane patients freely; but all skilful persons are now aware of its injurious tendency. In madness bleeding lowers the physical force, without in general, correcting the mental error. It weakens the external expression, without impairing the internal strength of the disease. It converts the fury of madness into the passive sullenness of melancholy.

Persons so constituted as to make much blood, should carefully avoid all those causes which tend to augment it, especially an indulgence in animal food, wine, and strong malt liquors; and when they are sensible of a considerable increase in the quantity, they should confine themselves to a light frugal diet, on pulse, fruits, bread and water, sleep but very moderately, and take much active exercise. Nothing can be more opposed to reason and experience, than far such individuals to have recourse occasionally to the abstraction of blood by the use of the lancet, or cupping-glasses, in order to prevent too considerable a formation and flow of this fluid; for habitual blood-letting invariably begets, under such circumstances, habitual plethora, which calls incessantly for a repetition of the same supposed remedy. Some persons are in the habit of being bled every spring or fall, or at both these seasons; but, however, robust the constitution, this is not a practice to be recommended, since, like all other continued bleedings at stated periods, it proves only a palliative remedy, which sooner or later

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greatly enervates the whole body, deranges its functions, induces a premature old age, and calls for a more frequent recourse to the operation.

Blood-letting is either *general* or *local*. General blood-letting is performed by a lancet, and consists in opening a vein or the temporaral artery, with a view of lessening the whole mass of circulating blood; local or topical blood-letting is performed either by means of a cupping-glass and scarificator, or leeches, applied in the vicinity of the disease, for the express purpose of lessening the quantity of blood in a particular part.

The mode of bleeding most frequently practised, is that of opening a vein; and it may be done in the arm, ancle, jugular vein, frontal vein, veins under the tongue, or the back of the hand, etc. In whatever part, however, venesection is performed, it is always necessary to compress the vein, between the place where the puncture is made and the heart. Thus the return of blood through the vein is stopped, the vessel swells, becomes conspicuous, and, when opened, bleeds much more freely than would otherwise happen. Consequently, in bleeding from the arm, leg, hand or foot, the bandage is applied above the puncture; while in bleeding from the jugular or frontal vein, the means for making the necessary pressure is applied below it. When the external jugular vein is to be opened, the surgeon generally makes the necessary pressure with his thumb.

All the apparatus essential for blood-letting on the part of the patient, is a bandage or fillet, two or more small pieces of folded linen for compresses; a basin to receive the blood, and a little clean water and a towel. On the part of the surgeon, it is necessary to have a good lancet of proper shape. He should never bleed with lancets with which he has been in the habit of opening any kind of abscesses, as very troublesome complaints have been the consequence of doing so.

In bleeding in the arm, the bandage is to be tied round the limb, a little above the elbow, with a sufficient tightness to intercept the passage of the blood through all the superficial veins; but never so as to stop the flow of blood through the arteries, which would

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tend to prevent the veins from rising at all. The veins being thus rendered turgid, the operator should choose the one which seems most conveniently situated for being opened, and large enough to furnish as much blood as it may be proper to take away. Before applying the bandage round the arm, however, the operator should always feel where the pulsation of the artery is situated, and he should not open the vein immediately over this part.

With respect to the choice of a vein in the arm, the most experienced surgeons give the preference to one which rolls least under the skin. Such a vessel, though sometimes less superficial than another, may commonly be opened with greater facility. The vein, however, is always to be fixed as much as possible, by the operator placing the thumb of his left hand a little below the place where he intends to introduce the lancet.

In fat subjects, the large veins at the bend of the arm are sometimes totally imperceptible, notwithstanding the fillet is tightly applied, the limb is put into warm water, and every thing done to make those vessels as turgid as possible. In this circumstance, if the operator has not had much experience in the practice of venesection, he will do well to be content with opening one of the veins on the back of the hand, after putting the member for some time into warm water, and applying a ligature round the wrist.

Now and then it will happen, that an inflamed and swollen state of the parts in the neighbourhood of the puncture will take place even when the operation has been skilfully performed, and with a clean lancet, and occasionally the inflamation will extend a considerable distance down the arm; when it will be necessary to keep the limb perfectly quiet in a sling to dress the puncture of the vein with some mild simple salve, as the Goulard ointment, page 190, to cover the whole surface of the inflammation with linen, wet with the cooling lotion, No. 68, page 173, or with cold spring water, and administer some gentle aperient medicine, as No. 73, page 176. These means are generally sufficient to remove such inflammation, but if not, skilful medical advice should be obtained without delay.

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SUSPENDED ANIMATION

A total suspension of all the mental and corporeal functions may arise :

1. From suffocation produced by hanging or drowning;
2. From the inhalation of carbonic acid, or some other noxious and irrespirable exhalation;
3. From a stroke of lightning or electricity; and
4. From intense cold.

In death, from hanging or drowning, the face is turgid and suffused with livid blood, especially in the former case; when it arises from the inhalation of irrespirable gases, the countenance is pallid; when from a stroke of lightning or electricity; it is also pale, the limbs being flexible, and the blood incoagulable; and when produced by intense cold, it is pale and shrivelled, and the limbs rigid.

In the first variety, or *asphyxia from hanging* or *drowning,* the chief immediate cause is suffocation, or a total obstruction to the respiration. The great majority of professional men of the present day do not consider there is any dislocation of the vertebrae of the neck, but regard the obstruction to respiration to be, in all instances, the chief, and in very many examples, the only cause of death, both in hanging and drowning. In hanging, the aperture of the windpipe is closed against the entrance of air by the pressure of the cord round the throat, and in drowning by a rigid spasm of its muscles. In drowning, it vasu formerly supposed that the suffocation was produced by a rush of water into the cavity of the lungs, but it is now well ascertained, that in many cases of death from submersion, not a drop of water enters into the lungs; and where it does enter, the quantity is, for the most part, very small; and that, whether small or large; it passes the windpipe after death instead of before it, and consequently cannot be a cause of death.

In the second variety of suspended animation, or *that from an inhalation of noxious vapours,* death in many cases takes place

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instantaneously, and from an utter destruction of the irritability and sensibility of the nervous system. In this case, there is not only a cessation of the action of the heart from the want of the necessary stimulus of the blood afforded by the lungs, but there seems a total abstraction of the nervous power, and this as completely in one part of the frame as in another.

The most fatal gases of the description before us, are the carbonic acid, hydrogen, nitrogen, and several of a more compound kind, which are thrown forth from putrefying animal and vegetable substances, and especially from cemeteries on opening fresh graves. The most common of these gases is the carbonic acid, which is chiefly found as a suffocating vapour in close rooms where charcoal has been burnt, at the bottom of large beer casks or wells, in cellars where a large quantity of wine or other liquors are in a state of fermentation, and in many natural caverns in the earth's surface. As it will not support flame, the common and easiest test, where it is suspected to exist, is that of a lighted candle, which is well known to be extinguished immediately, if this gas be present in a quantity sufficient to be injurious to respiration.

In the third variety, the whole system appears not so much rendered insensible to stimulants, as to be suddenly exhausted of its entire stock of nervous power, like a Leyden phial upon an application of the discharging rod; in consequence of which the limbs are flexible, and the blood does not coagulate.

Asphyxia from intense cold is always preceded by an insurmountable desire to sleep, which the utmost exertion of the will is unable to overpower. The sleep is, in most cases, fatal, and becomes the sleep of death. Extreme cold being one of the most formidable sedatives, carrying off the heat of the body far more rapidly than it can be recruited, it exhausts it of its irritable and sensible power, and death thus insensibly takes place.

Treatment; of suffocation by drowning—Here the two grand means by which we are to operate are the *restoration of breathing,* and the *promotion of warmth and circulation.* Dr. H. Silvester's method is now considered the beat, and his directions are—Place the patient on his back, with the shoulders raised and supported on

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a folded article of dress, and secure the feet, in a spacious room with a very good fire. Send immediately for medical assistance and blankets.

To maintain a free entrance of air into the windpipe. Wipe the mouth and nostrils. Draw forward the patient's tongue, and keep it projecting beyond the lips. *If the lower jaw be gently raised, the teeth may, be made to hold the tongue in the required position. Should it be found necessary, the tongue may be retained in that position by passing a handkerchief under the chin and fastening it over the head.*

To imitate the movements of deep respiration—Raise the patient's arms upwards by the sides of his head, and then keep them stretched steadily but gently upwards and forwards for two seconds. This action enlarges the capacity of the chest by drawing up the ribs, and induces an *inspiration*. Next, turn down the patient's arms and press them gently and firmly for two seconds against the sides of the chest. This action diminishes the cavity of the thorax, by pressing down the ribs, and produces a forcible *expiration*. Repeat these measures alternately, deliberately, and perseveringly fifteen times in a minute.

To induce circulation and warmth, and to excite inspiration—Rub the limbs from the extremities towards the heart. Replace wet clothing by warm and dry covering. Occasionally dash cold water in the patient's face. These measures are perfectly compatible with the systematic performance of the imitation of the movements of respiration. A similar remark applies to the use of the warm water bath, or hot air bath, if required. Should a warm bath be procurable, the body may be placed in it upto the neck, continuing "to imitate the movements of breathing". Raise the body in twenty seconds from the bath, and dash cold water against the chest and face, and occasionally pass ammonia under the nose.

To excite inspiration—During the employment of the above method excite the nostrils with snuff, smelling salts, or tickle the throat with a feather. Rub the chest and face warm, and dash cold and hot (temperature 120° Fahr.) water alternately on them.

These measures of imitating the movements of respiration,

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rubbing the limbs, and applying warmth to every part of the body should be unremittingly continued for many hours. For this purpose relays of rubbers should be provided, each relay waiting outside the room till their services are required, so as not to render the air impure by their breathing. Mr. South refers to a case in which no sign of revival appeared until the rubbing, etc. had been continued for eight hours and a half from the time of the accident. A full expiration of warm air from the lips of a bystander should be repeatedly forced into the patient's mouth, and his nostrils held close to prevent its escape by that channel. Inflation may also be attempted by a pair of common bellows; or which is far better, if it can be readily procured, by a pair of bellows communicating with a pipe introduced through the nose or mouth into the windpipe, or as some have judiciously recommended, into an aperture made between the rings of the windpipe. If the lungs cannot be fully inflated by the other means advised, this aperture in the windpipe should invariably be made, and without much loss of time, since effectual inflation is more certainly secured by it than any other method, and the operation; if skilfully performed, is quite safe. Injections of assafoetida and oil of turpentine, or other stimulants, mixed with warm water, should at the same time be thrown into the rectum; and, if it be possible, some warm and cordial stimulant, as volatile tincture of valerian, volatile alkali, brandy, or the compound spirit of lavender, should be conveyed into the stomach by means of a canula or catheter.

Blood-letting was formerly recommended, but is now never employed.

Tobacco injections are altogether improper.

Returning life is first usually discoverable by the symptoms of sighing, gasping, twitching, slight palpitation, or pulsation of the heart; in effect, by a weak action of most of the organs. Our efforts should here be redoubled, for the feeble spark still requires to be solicited and nourished into a permanent flame, and has often disappeared from a relaxation of labour. A spoonful or two of warm wine, or wine or brandy and water, should now be given by the mouth, as soon as the power of swallowing is sufficiently restored;

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which should be shortly succeeded by light, warm, and nourishing food of any kind, with a well-heated bed, and perfect tranquillity.

In attempting the recovery of *those who have hung themselves*, the same means are to be resorted to. Here bleeding from the jugular vein may be more frequently found necessary than in attending the drowned, since in hanging there is a greater tendency to apoplectic symptoms than in drowning; yet even here the quantity extracted need not be large, and should rarely exceed six or eight ounces.

How long the living principle may, under the foregoing circumstances, remain attached to the animal frame, and afford a chance of recovery, is not ascertained with any degree of accuracy, but I believe it exists in many instances longer than is generally supposed; and there are some undoubted cases of recovery, both from drowning and hanging, after such a lapse of time as ought to teach us the useful lesson of the necessity of not despairing too early. If the submersion has not exceeded five minutes, persons will be usually found to recover without much difficulty. After a quarter of an hour or twenty minutes, recovery is not common; and after half an hour it is nearly hopeless. Yet of twenty-three instances of the recovery of drowned persons at Paris, one was restored to life after having been three-quarters of an hour under water, four after having been half an hour, and three after a quarter of an hour. Mr. Glover, a surgeon in London, relates the case of a man who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after; but his exertions for the recovery of this person were continued unremittingly for four hours and a half, before any signs of returning life were visible.

In a suspension of animation arising from the inhalation of Noxious Airs, the patient, if any degree of sensibility remain, should be freely exposed to the open air, instead of to a heated atmosphere, as in the preceding variety; and if he can swallow, acidulous liquids, as lemonade, etc. should be given him. If insensible, cold water should be largely dashed on his face; strong vinegar, and especially aromatic vinegar, be rubbed about his nostrils, and held under them, and stimulating clysters of assafoetida, or oil of turpentine, etc. mixed with water be injected. The lungs should be inflated with

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the warm breath of a healthy man, as advised under the preceding variety, or with oxygen gas. The inflation with oxygen gas is highly to be recommended.

But it appears that the use of the concentrated solution of chloride of soda or lime, is the most speedy and certain means of restoring persons who have been suffocated with carbonic acid gas, in any shape or combination, as it arises, for example, from burning charcoal, or from accumulated filth, or is encountered in descending into wells or cellars, or in opening extensive public sewers; etc. The patient should be brought into the open air, and a bottle of the solution of chloride of soda or lime, held close to his nostrils, so as to cause him to inspire it, which should be continued until the patient has fully regained his consciousness and the power of walking, which he should be kept doing for some time in the open air. Acidulated liquors may with propriety be given at the same time.[1]

1. The relation of the following case will be interesting to all my readers; and may serve to impress upon their minds the value of the above *chlorides* in asphyxia, from inhaling carbonic acid gas. A workman of a vermicelli maker was exposed to a current of deleterious gas, which proceeded from an accumulation of filth and rubbish heaped together from a pit of night soil which was undergoing repair. He fell without consciousness. M. Labarraque was called to the patient soon after the accident; the symptoms were, pulse strong, but furtive on pressure; excessive rigidity of the limbs; arms stretched, stiff and almost cold; head thrown backwards; veins of the neck turgid; face and lips violet-coloured; eyes closed, dull and insensible; respiration appeared extinct; the danger seemed imminent; vinegar, aether, and strong ammonia, placed under the patient's nostrils, produced no effect. The sensibility could not be recalled. A napkin moistened in the solution was placed under the patient's nostrils, and in less than one minute he uttered an acute and plaintive cry or groan; the rigidity ceased; his eyes opened to shut again in a few seconds; the tetanic rigidity had re-appeared with its frightful train. M. Labarraque had withdrawn the *chloride* too soon. The usual stimulants again tried produced no effect. The *chloride* was re-applied; in less than a minute the rigidity of the limbs ceased, and the patient sent forth a piercing cry, which was stopped by the linen impregnated with the *chloride*. A full inspiration took place, the air necessarily passing through the moistened linen, was therefore charged with *chloride* saturated with water. The disinfection of the gas contained in the chest was no doubt complete, since the symptoms ceased. He was made to walk in the street; keeping the *chloride* under his nostrils. Repose and the open air were afterwards prescribed, and the patient recovered his health, as perfectly as before the accident. Another case of asphyxia, from a similar cause, is related by M. Labarraque, in which the patient immediately recovered from adopting the same means after forty-eight house had elapsed since the commencement of the symptoms. In this instance the patient was not altogether insensible, though in a most deplorable condition.

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A proper use of electricity is also, in many instances, found very serviceable. The fluid should be transmitted along the channel of the nerve, from the seat of the phrenic nerve in the neck, to the seat of the diaphragm, or that of the par vagum and great sympathetic nerve immediately under the sterno-mastoid muscle. Little advantage is likely to accrue from passing the electric aura across the chest, directly through the heart and lungs, which is a common practice.

The general plan of medical treatment proper when *animation has been suspended from a stroke of lightning,* has been detailed under the first variety. Stimulants of the most active kind should be resorted to without loss of time, as volatile alkali, and the stimulating liniments at page 161, externally; and phosphorus, brandy, and volatile tincture of valerian, internally. But of all stimulants, that of electricity seems to be especially called for in the present case.

In the treatment of a person who has been so long exposed to *extreme cold,* as to be in a torpid and apparently lifeless state, great caution is necessary in the employment of warmth, since its too quick and free application will undoubtedly produce mortification, and endanger life. The body should be first rubbed all over with snow or very cold water, and after active friction of this kind has been continued for a quarter of an hour, it should be wiped perfectly dry, and submitted to the friction of warm hands, several persons being engaged in the process simult-aneously. The body ought not, in the first instance, to be brought into a warm room; but after the friction with cold water has been continued for the period specified, and the body been wiped dry, then removal will be very proper and necessary, and it should be laid in flannel. Warm air may then be breathed into the lungs, and a little lukewarm wine and water conveyed into the stomach. Persons who have been buried in snow for a considerable time, or so exposed to intense cold, as to be deprived of animation for some hours, have been perfectly restored by these means; and it would be highly criminal in any professional man to relax his exertions to recover such persons, until his efforts have been strenuously exerted without effect for several hours. I

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have reason to fear, that many lives have been lost under such circumstances, from want of information and perseverance on the part of those medical practitioners who have been called upon for assistance.

In the treatment of infants who have been overlayed, or otherwise suffocated by the carelessness or inattention of their nurses, and of persons who suddenly expire in convulsions, or fainting fits, precisely the same plan should be pursued as is laid down under the first variety, or suspended animation from drowning. Here, as in suffocation from drowning, the two grand agents of restoration are warmth, and inflation of the lungs; and if these means are resorted to with *judgment* and *perseverance,* many of such cases will terminate favourably, which would be lost under a less vigorous and patient treatment.

Of the treatment of poisoning by CHLOROFORM, I have already treated at pages 33-34.

INTOXICATION

Few persons are fully aware of the injurious effects resulting from a daily use of spirituous and other fermented liquors in large quantities; yet their destructive tendency is proved to a demonstration, by the visible effects produced on the minds and bodies of the unhappy victims of this base and demoralizing practice, and on animals who feed on the refuse of distilleries and breweries. Those persons who exceed a moderate quantity of such drink, in a few years grow heavy and awkward in their gait; and bloated in their countenance; their complexion becomes bilious and sallow; their breath fetid; their eyes inflamed; their nose red and swollen; their appetite deficient and capricious, and their bowels irregular; and it is a remarkable fact, that hogs, fowls, and other domestic animals, when allowed to feed at pleasure on the refuse left after distillation and fermentation in distilleries and brewers' yards, soon become diseased, their intestines and livers exhibiting a state of great enlargement and hardness. By a large quantity of these liquors is here meant, any portion that sensibly affects the head or stomach, and which renders the individual taking it

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uncomfortable, either soon after or on the succeeding morning. If a man, after partaking of strong liquors, is less able to transact any important and difficult business than he was before, he may be assured of having not only exceeded the bounds of prudence and moderation, but of having taken such a quantity as cannot fail to be more or less injurious to the stomach, bowels, and heart, the healthy action of which are of the first importance to our bodily comfort and happiness.

It is fully ascertained, that drinking freely of strong liquors, especially of ardent spirits, immediately deranges the stomach, intestines, and liver, three of the most important organs in the human frame; and, in many instances, a short continuance of this practice brings on indurations and positive disease in the structure of those parts. Such effects are more frequently induced by the daily indulgence in what is too often considered a small quantity of such drink than is generally imagined. This practice affects the teeth also very visibly, giving them a stained and foul appearance. General Norton, the Mohawk chief, who was in this country a few years ago, was asked by a professional gentleman concerning the state of the teeth among the Indians. His reply was decisive upon this subject. "When the Indians (says he) are in their own settlements, living upon the produce of the chase, and drinking water, their teeth always look clean and white; but when they go into the United States, and get spirituous liquors, their teeth look dirty and yellow; and I have often heard that they were frequently afflicted with the tooth-ache, and obliged to have their teeth drawn".

The state of intoxication is similar to that of incipient apoplexy, or palsy. Drunken men stagger, their tongue loses its power of speech, they stammer and see things double, and moving circularly. The mind is equally affected, and imbecility is the concomitant effect. All these symptoms of partial palsy arise chiefly from the pressure of the blood-vessels on the brain, which are then surcharged with blood. If the intoxication has arrived at its utmost height, there is no longer any difference between this and the true appolexy, and the powers of sensation and motion are greatly impaired, if not entirely suspended. If, in this state, one of the

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smaller blood-vessels that press on the brain with unusual weight should accidentally burst, he is in danger of instant death.

A person much intoxicated ought to be carried without delay into a room of moderate temperature, and placed in bed between the blankets, with his head raised, particular care being taken that his neck is no way twisted, or has anything tight about it. Indeed, all close bandages on the body should be loosed; and if the individual is desirous of drink, to quench his thirst, the simplest beverages will be the best, such as tea, or toast and water. A gentle emetic of ipecacuanha powder is alwas useful.

When however, a man is found in a state of deep and alarming intoxication, with laborious breathing, cold extremities, and other threatening symptoms, he should be immediately cupped in the back of the neck, or a few ounces of blood taken from the arm, his feet and legs put into warm water, and a sharp purgative clyster, as No. 8, page 146, administered without delay. The clyster may be repeated, if necessary, three or four times within a short period.

Baron Cramer and a German physician of the name of Roth, have highly praised the following medicine as a valuable remedy for tippling and drunkenness. Dr. Roth says that he has succeeded with this medicine in completely curing many poor creatures, both men and women, who were actually killing themselves by this practice. I hope that many in this country addicted to this baneful habit will try it and find it effectual.

Take of Tincture of calumba	1 tea-spoonful;
Tincture of cascarilla	1 tea-spoonful;
Compound tincture of gentian, ...	1 tea-spoonful;
Infusion of quassia	1 wine-glassful;
Diluted sulphuric acid	20 drops.

Mix, and take it twice or thrice a day; and have a jug of cold water dashed over the head every morning on coming out of bed, and the feet bathed in warm water every night. Continue this for six or eight weeks.

Sometimes persons unaccustomed to drink strong liquors exceed the bounds of moderation, and become tipsy from the use

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of a small quantity of some fermented or spirituous liquor. Those of sober habits may, in an unguarded moment, be overcome in this manner, and such persons will find that the WATER OF AMMONIA often affords effectual and speedy relief in tipsiness. Twelve drops of the *pure water of ammonia* may be taken in a large wine-glassful of milk and water, or. water and if not effectual, it may be repeated in ten minutes after, and again in half an hour.

Dr. Plet relates the case of a young man of nervous and irritable constitution, who on the 15th of January, 1822, became so violently drunk, that he did the most indecent things, and broke every thing he could get at. When Dr. Plet saw him, he was armed with a knife, and running at his parents, with his eyes glaring and his mouth foaming. Twelve drops of the water of ammonia were given him in a glass of sugar and water, and he was calmed immediately, ashamed and confused at his conduct.

THE MEANS OF PREVENTING THE GENERATION, AND CHECKING THE PROGRESS OF TYPHUS, AND OTHER MALIGNANT FEVERS

In order to prevent the generation of malignant fevers, it is necessary to be acquainted with the sources of their contagion, and to avoid them.

Concerning the source of typhus and other contagious diseases, the most probable conjecture is that each, though afterwards propagated by its peculiar contagion, is at first produced independently of contagion, by a concurrence of causes which rarely takes place. And when at any period it happens that no person labours under the disease, it cannot be reproduced unless a sufficient quantity of the contagion is preserved in fomites, (substances impregnated with contagion), or till the same causes which first gave rise to it again conspire. Thus, contagious diseases may for a long time disappear, while a different combination of causes may give rise to others, which in like manner spread by their contagions.

The combination of a very few circumstances, and those of frequent occurrence, is sufficient to produce typhus fever. The most

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powerful of these are confinement in ill-ventilated and crowded places; uncleanliness of all kinds; the putrid effluvia of animal and vegetable substances; and innutritious and unwholesome food. Hence we find, that typhus frequently arises in hospitals, jails, transport ships, and the close and crowded habitations of the poor, where free ventilation has been little attended to; and it is evident, therefore, that the effluvia of the living body become putrid by stagnation, and are capable of producing it.

The confinement of the putrid effluvia is not always necessary for the production of typhus, for when the cause is sufficiently powerful, the whole air of a neighbourhood may be so loaded as to be capable of producing it. A malignant fever has been occasioned by the offal of a city being accumulated without the walls; and it has often happened tat typhus has spread over the adjacent country, when the dead were left unburied on the field of battle.

Contagious diseases may spread,

1. By actual contact;
2. Through the medium of the air;
3. By means of substances which have been in contact with or near the sick.

Concerning the first of these little need be said. It is probable, that the larger the surface which has been in contact with the sick, and the longer it has been so, the less will be the chance of escaping infection.

The air appears to be the medium through which contagion, in most instances, is applied to the body. It is common for people to be infected in consequence of approaching the sick, without touching them, or any thing which has been in contact with them. It appears from a variety of observations, however, that the contagious atmosphere, that is, the air sufficiently impregnated with the contagion to produce the disease, extends only for a short distance around the sick, not only in typhus, but in scarlet fever, and all other contagious diseases; certainly not above a few yards probably not above a few feet.

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Contagion, however, may be conveyed from place to place by the wind, and thus the disease may be communicated at a considerable distance. In proof of this, many facts may be adduced; one of the most striking on record happened on the 12th of May, 1750, at the Old Bailey. The prisoners were kept for nearly a whole day, is a small, ill-ventilated, and crowded apartment; some of them laboured under the jail fever. When they were brought into court, the windows at the end of the hall opposite to the place where the judges sat, were thrown open; the people on the left of the court, whom the wind blew were infected with the fever, while those on the opposite side escaped. The lord chief justice and the recorder, who sat on the lord mayor's right hand, escaped; while the lord mayor and the rest of the bench, who sat on his left, were seized with the distemper. Many of the Middlesex jury on the left side of the court, died of it, while the London jury, who sat opposite to them, received no injury.

Generally speaking, hot weather, and damp foggy weather, is favourable, and cold weather unfavourable, to the spreading of contagious diseases.

The stools, especially if unusually fetid, are most apt to communicate the contagion to the air; next to these, the patient's breath; and then the effluvia from his body.

The last of the ways by which a contagious disease may spread, is by *fomites*, substances impregnated with contagion. Fomites often retain contagion for a great length of time, and may convey it to any distance. It is a general opinion, that fomites more readily communicate the disease, and communicate it in a worse form, than the sick themselves. Dr. Lind remarks, "I am convinced, from very extensive experience, that the body of the sick is not so apt to communicate the infection, as the dirty linen, etc. which has been about him". Contagion adheres to the furniture and utensils employed about the sick, as well as to all kinds of clothes, and even lurks in the walls of the apartments where the sick have lain. Woollen materials and wood are thought most apt to retain it.

On the foregoing facts respecting the sources of the contagion of typhus and other malignant fevers, and the different ways in

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which they spread, are founded the means of preventing their generation, and many of the precautions employed for checking their progress; and it is obvious, that a careful consideration, and proper use of these facts, will lead to the employment of many of the most powerful means for accomplishing these most desirable purposes. Communication, and especially actual contact with the sick, must be avoided; the patient should be lightly covered with bed-clothes; his chamber should be freed from all unnecessary furniture, and kept perfectly clean; his sheets and body-linen be frequently changed, and instantly taken out of the room; as should also the stools and urine.

Above all things, the chamber and adjoining apartments should be freely ventilated, by opening the opposite windows, or the windows and doors; for it should be constantly remembered, that contagion sufficiently diffused becomes inert, and that without a free circulation of air in the apartments of persons ill with malignant fevers, even fumigation is useless. Next to the free admission of pure air, fumigation with the mineral acids is one of the most effectual means of checking the progress of contagious fevers. The nitric and muriatic acids appear to possess equal power; but the former is preferable where persons are unavoidably obliged to be present, as it is breathed with the least inconvenience. The late Dr. Johnstone, of Worcester, and Dr. Carmichael Smyth, of London, are the physicians to whom we are chiefly indebted for the knowledge of the efficacy of fumigation, with the mineral acids, in destroying the contagion of malignant fevers. Dr. Smith used the nitric acid vapour as a fumigation, with the greatest success, in the typhus fever which broke out in the year 1780, among the Spanish prisoners confined in Winchester Castle, and also in 1798, in checking the further progress of a very malignant fever which had made great ravages among the crews of the Russian ships of war at Sheerness. From the great value of the fumigation, Parliament voted Dr. Smyth 5000(L) as a reward for the discovery.

The mode of obtaining the nitric acid vapour is by decomposing nitre by means of heated sulphuric acid, which may be done as follows : Put half an ounce of sulphuric acid, or best oil of vitriol, into a crucible, glass, or china cup, and warm it over a lamp, or in

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heated sand, adding to it, from time to time, a little nitre. Several of these vessels are to be placed in the patient's chamber, and the neighbouring apartments and passages, at twenty or thirty feet distance from each other, according to the height of the ceiling, and the virulence of the contagion.

The muriatic acid gas is obtained in the following manner. Put one pound of common salt into an earthern vessel, and pour over it from time to time a small quantity of sulphuric acid, till the whole salt is moistened. If the air is foul and peculiarly offensive, apply a gentle heat under the vessel, to extricate a larger quantity of vapour; but, in general, the simple addition of the acid to the salt will be found sufficient, unless the apartment be very large.

The most simple means of purifying houses and goods, is washing and exposing them to the air, and these are generally sufficient. It is common to wash, or, what is better, to lime-white the walls of houses where the sick have lain; and to procure a free circulation of air, by opening the windows, and making fires in the house. The clothes, and other articles which have been in contact with the sick, should be sprinkled with Condy's Fluid, and washed, then exposed to the air for a considerable time. In the different lazarettos of Europe, exposure to the air for a certain length of time, is generally thought sufficient to purify merchandise, even from cities where the plague rages.

A most valuable discovery was made some years since of substances which have greater power in destroying putrid and offensive effluvia arising from animal and vegetable matter, than any means previously known, and these substances being of very extensive use, and capable of being applied with equal facility, economy and success, they demand some notice in this place. The substances referred to are the chloride of soda and the chloride of lime, and to M. Labarraque, an apothecary in Paris, the honour is due of having discovered their inestimable value, and of having freely communicated their composition, and the mode of applying them, to the public authorities of France, for the general benefit of mankind. M. Labarraque's experiments have been of the most public and decisive nature, and have been carried on under the

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immediate inspection of some of the most scientific and distinguished physicians, surgeons and chemists, at the *Morgue,*[1] and in all the great hospitals at Paris; in the extensive workshops where catgut and other strings are manufactured from the intestines of animals, in a state of putrefaction; in the filthy and offensive public sewers, and in the lazaretto at Marseilles; from which it clearly appears, that the chlorides of soda and lime are highly efficacious in the destruction of noxious effluvia and that they may be used with equal success in destroying the infection of putrid fevers, in purifying the wards of hospitals and sick rooms, in the disinfection of crowded ships and foul stables, in the prevention of putrefaction in bodies previously to interment, and in the disinfection of reservoirs of urine, in the purification of putrid water, in short, in the total destruction of every species of infectious effluvia, and offensive odour. It has been used with excellent effects in correcting the fetid discharges from foul ulcers, cancer, hospital gangrene, carbuncle, etc.

In typhus, putrid sore throat, measles, small-pox, and other infectious fevers, the apartment of the patient is to be freely sprinkled with diluted chloride of lime, twice a day or oftener, if the disease be very malignant, or the apartment unusually confined. Sometimes it is advisable also to leave a small quantity, as a pint or two, exposed on a dish, or in a bason, in the sick chamber. And where many persons are living in the same house, or the disease is particularly rife, it is highly desirable to sprinkle the adjoining apartments and passages with the same liquid.

Medical men and others, attending patients labouring under contagious diseases, should have a bottle of the diluted liquid always at hand, which they ought to take with them and respire whenever they approach the bed-side of the patient, at the same time sprinkling some on the floor, and around the bed.

Ships which have been impregnated with contagious matter, are to be disinfected in the same manner, *viz.* by sprinkling their

1. The place where all the dead bodies found in the Seine, or in Paris, or its environs, are deposited for inspection, that they may be claimed or identified previously to interment.

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whole interior with the diluted chloride of lime twice or thrice a day.

In no case ought the use of any disinfecting fluid to supersede strict attention to cleanliness, and a free ventilation of the apartments of the sick.

BURNETT'S PATENT DISINFECTING FLUID and CONDY'S DISINFECTING FLUID seem to be more efficacious in purifying than the chlorides of lime or soda; and they possess the peculiar advantage of having in themselves *no smell.* They are sold by all druggists, with full directions for use. *Condy's fluid* is the permanganate of potash, and is thought very highly of by professional men generally.

POISONS

Poisons are naturally divided into three classes, *viz.* mineral, vegetable and animal.

Mineral Poisons

The chief of the mineral poisons are the strong acids, as oil of vitriol, muriatic, nitric, and oxalic acids; the concentrated alkalies, as potash, soda, and ammonia; and the, preparations of arsenic, copper, antimony, mercury, silvery nitre, and sal ammoniac.

Strong Acids.—The symptoms which quickly follow the swallowing of oil of vitriol, or any other strong acid, are acid burning, and excessive disagreeable taste; acute pain in the throat, stomach and bowels; insuperable fetid smell from the breath; frequent eructations, vomiting of various coloured matters, sometimes mixed with blood, producing in the mouth a great sensation of bitterness, effervescing when mixed with chalk, and reddening the tincture of turnsole or litmus; in general, copious evacuations, more or less bloody; colic, and pains so acute, that even the weight of any clothing becomes insupportable; difficulty of breathing; frequent and irregular pulse; excessive thirst, yet drink augments the pain, and is shortly after vomited; the skin, particularly of the lower extremities, appears frozen; cold and clammy sweats;

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vain and repeated efforts to make water; impossibility of maintaining the same position; convulsions of the face and limbs. The intellectual faculties are rarely disordered. All these symptoms, however, are not always found in the same person, and their severity will in every instance, much depend upon the strength and nature of the acid. The nitric acid produces yellow spots upon the lips and skin.

In the treatment of these cases, the most efficient antidote is *calcined magnesia;* next to this *soap*, and then *chalk and water.* An ounce of calcined magnesia should be mixed with a pint of water, and a glassful taken every two minutes, so as to promote vomiting, and prevent the acid from acting. Should this not be at hand, dissolve half an ounce of soap in a pint of water and give a glassful every few minutes. Or chalk and water in any dose will be found very useful. If neither of these can be directly procured, decoction of linseed, marshmallows, gum arabic, or any other mucilaginous liquor may be taken in the mean time; for the success of the treatment depends entirely upon the activity with which aid is given. Clysters prepared with magnesia, soap, or chalk, should also he given.

The use of emetics, or other means of exciting sickness, as the finger, etc., is not advisable here, but the speedy employment of *Read's Stomach Pump*, with the view to extract its contents, is highly proper in this and every other case of poison taken into the stomach.

The acid being neutralized by the foregoing means, the in-, flammation caused by its action is next to occupy our attention. To reduce this, the patient should be placed in a warm bath at about 95 degrees, and the region of the stomach and bowels fomented with cloths rung out of lukewarm water. If relief be not speedily obtained by these measures, fourteen or sixteen leeches should be applied to the surface of the abdomen, and blood must also be taken from the arm. If there be a difficulty of swallowing, and the inflammation be great, twelve or fifteen leeches should be applied to the neck. The repetition and extent of the blood-letting, both by leeches and the lancet, must be entirely regulated by the severity of the pain, and the urgency of the other symptoms denoting

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inflammation; for the safety of the patient henceforth depends upon the copious evacuation of blood; and the debility caused thereby is to be considered merely as a slight inconvenience. These energetic measures will be assisted by the administration of a drink made with linseed, mallows, or gum arabic boiled in water. Every sort of food, not excepting broth, is to be forbidden.

Should the convulsive movements continue after the inflammation has subsided, thirty drops of compound spirit of sulphuric ether, twenty drops of laudanum, and three ounces of distilled water, may be mixed together, and a table-spoonful be given every fifteen minutes. The patient must return to his usual solid diet by very slow degrees.

Strong Alkalies—The effects of these are nearly similar to those caused by acids, except that the taste of the alkalies is not sour, but acrid and urinous. The matter vomited does not effervesce when mixed with chalk, but turns the blue colour of violets green.

Vinegar and lemon-juice are the best antidotes to the concentrated volatile alkali, potash, and all other alkaline poisons. A glassful of water, mixed with a table-spoonful of vinegar, or lemon juice, should be given frequently, and in defect of these, simple water, in such quantities as to cause vomiting. Emetics, and other irritating means, are to be avoided. If this be not sufficient, the treatment by leeches, the lancet, warm bathing, etc. as above recommended, must be followed.

Corrosive Sublimate, Calomel, Etc.— When large quantities, either of corrosive sublimate, arsenic, copper, or any of the preparations of antimony, tin, silver, etc. are taken, the patient complains, in general, of a severe constriction in the throat, pain in the back part of the mouth, stomach, and intestines, and a desire to vomit, vomiting follows with more or less violence. The matter vomited is of various colours, often mixed with blood, it does not effervesce when thrown on the ground, or mired with chalk; it never changes the colour of violets green, and when it reddens the tincture of litmus or red cabbage, it is in a very slight degree. To these alarming symptoms are joined frequent and fetid eructations; hiccup; difficulty of respiration, and almost suffocation; the polse

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becomes small, hard and accelerated, and in certain cases, it may said to vibrate under the finger like catgut.

An inextinguishable thirst, difficulty of making water, cramp, the extremities of an icy coldness, horrible convulsions, general decay of strength, the features of the face changed, and delirium, are the symptoms which announce approaching death, unless energetic measures for relief are speedily put in practice.

The *white of egg* beat up with cold water, is the best counter-poison to corrosive sublimate, and all other mercurial preparations. In defect of this, milk may be used with great success. The whites of twelve or fifteen fresh eggs should be beat up and mixed with two pints of cold water, and a glassful taken every two or three minutes, so as to favour vomiting. If the number indicated be not at hand, as many as are should be used, and others immediately sought after. The yolks may also be used with some advantage. In defect of eggs altogether, milk, gum-water, decoction of linseed, mallows, barley, or sugared water, should be taken in abundance. If, after taking the number of eggs prescribed, the symptoms be not removed, the same should be repeated, these should be prepared before hand, so that we may act with the greater promptitude. The patient is then to be treated by bleeding with leeches and the lancet, etc. as ordered under the head of strong acids, the abstraction of blood being proportioned to the severity of the symptoms denoting inflammation.

Arsenic.— Though this article is not unfrequently administered in small doses, for the cure of ague, and other diseases, it should never be forgotten that, even in extremely minute quantities, it is an energetic poison, which is readily absorbed into the circulation, and has a strung tendency to promote disease in the heart.

In cases of poison by arsenic, medical practitioners universally agree, that the first indication is to empty the stomach as quickly as possible. If Mr. Read's syringes invented for this purpose, be at hand, it is by far the best contrivance, and serves to empty the stomach more certainly and speedily than any kind of emetics. In case this syringe cannot be procured directly, the patient should

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drink large quantities of sugar and water, of warm or cold water, of linseed tea, and other mucilaginous fluids; by this means the stomach is filled, and vomiting effected. A drink composed of equal quantities of lime water, and sugar and water, may also be given, and sometimes with great advantage. At the same time, the throat ought to be tickled with a feather or the finger. Some practitioners are in the habit of giving emetics in the present case, while others refrain from them, on account of their tendency to increase the irritation created by this poison. If ever they are resorted to sulphate of zinc, in a dose of twenty-five grains, is the most proper.

When inflammation of the abdomen, and alarming nervous symptoms prevail, the means of relief are blood-letting, the warm bath, fomentations, emollient clysters, and antispasmodic medicines, as advised under strong acids.

When the poison has been evacuated from the stomach, it should never be forgotten, that the success of the treatment will depend, in a great measure, upon the regimen observed during the patient's convalescence, which is almost always tedious, and he should be chiefly nourished with milk, gruel, rice, and beverages of a softening mucilaginous nature. This advice is applicable to convalescencies after swallowing any mineral poison.

Copper—The white of eggs is the best antidote to all the preparations of copper when taken in poisonous quantities. A person who has swallowed verdigris, blue vitriol, or any salt of copper, is to be treated after the manner directed for corrosive sublimate.

Tartar Emetic— When large and poisonous doses of tartar emetic, or any other antimonial medicine, have been swallowed, should there be severe vomiting with cramp in the stomach, abundant supplies of sugar and water, or simple water, must be administered. If the vomiting continue after the poison may be supposed to have been rejected, and the pain be augmented, give a grain of opium, or thirty drops of laudanum, or of the solution of acetate of morphia, and repeat it at an interval of a quarter of an hour, for two or three times, if the symptoms are not calmed. In cases where the symptoms continue or increase, twelve or fifteen leeches should be applied to the abdomen, and to the throat also, if there be a great difficulty of swallowing.

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If the individual who has taken the antimonial preparation does not vomit, and yet suffers from the other symptoms, several glasses of sugar and water should be taken; and if, in spite of this, vomiting does not occur, a decoction of gall-nuts, or of Peruvian bark, should be administered directly. Four or five gall-nuts may be boiled for ten minutes in two quarts of water, and then strained; of which a tumblerful should be taken every five or Six minutes. If tire gall-nuts are not at hand, two ounces of yellow bark may be boiled for the same time in the same quantity of water, and liven in the same manner. Emetics ought not to be given. If, notwithstanding the use of these means, the symptoms continue, the proper treatment will consist in the use of leeches to the region of the stomach, the warm bath, fomentations, etc. as already recommended under the head of strong acids, at page 305-06.

Tin—Milk is the best counter-poison to the salts of tin, of which several glassfuls should be given; or, in defect of milk, warm or cold water, to excite vomiting; as, for the rest, if the symptoms increase, the means of relief are bleeding, fomentations, emollient clysters, and other means for subduing inflammation recommended at page 306-07.

Lunar Caustic, or Nitrate of Silver—*Common kitchen salt* is the most effectual antidote to lunar caustic. A solution of a large spoonful in two pints of water should be made, and several glasses of this salt-water taken directly; vomiting will take place, and the symptoms diminish. If they should continue, the treatment calculated to allay irritation and inflammation, as pointed out at page 306-07, must be followed.

Poisoning from *bismuth* and *zinc*, is to be treated in the same manner as that produced by arsenic.

Nitre— When nitre has been swallowed in an excessive dose, the treatment should be the same as that advised for arsenic, except that the lime water must be suppressed. *See* page 306-07.

Lead—Sugar of lead, extract of lead, and the other poisonous preparations of this mineral, when taken in a large dose, give rise to a sweet, astringent, metallic taste, constriction of the throat, pain

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in the stomach, desire to vomit, or vomiting, and that often mixed with blood, fetid eructations, hiccup, difficulty of respiration, and other alarming symptoms.

Glauber's salt, Epsom salt, and hard water, are the best antidotes here. Several glasses of a solution of one of these salts should be given. The proportion may be half an ounce of the salt to a wine quart of water. When we have by this means occasioned vomiting, and expelled or decomposed the poison, and the principal symptoms are relieved, sugar and water, or gum water may be taken; but should the pain and other indications of inflammation' make progress, the treatment by leeching indicated at page 247, must be followed.

Vegetable Poisons

The principal vegetable poisons are opium, hemlock, foxglove, thorn-apple, deadly nightshade, henbane, poisonous mushrooms and prussic acid.

The general effect of these poisons, when introduced into the stomach, in a large quantity, are stupor; numbness; heaviness in the head; desire to vomit, slight at first, but afterwards insupportable; a sort of intoxication; pupil of the eye dilated; furious or lively delirium; sometimes pain; convulsions more or less violent of different parts of the body; palsy of the limbs; pulse variable, but in general strong and full at the commencement of the disease; respiration somewhat accelerated. Quickly the convulsions and dejection increase, and death ensues if relief be not speedily afforded.

Opium, Hemlock, Nightshad, and Henbane—In poisoning from either of these articles, and indeed from any vegetable or mineral substance, the first indication is to evacuate the stomach and I repeat, that if Mr. Read's syringe or stomach pump be at hand, it is far the most certain and the best way of accomplishing this evacuation. In defect of it, a scruple, or half a drachm, of sulphate of zinc should be given directly, in water, and repeated after an interval of a quarter of an hour, if necessary. It should rarely or never be repeated a third time. The success of the emetic

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will be favoured by irritating the throat with the finger or a feather, and especially by freely sprinkling and dashing cold water over the face, neck and breast of the patient. The free application of cold water to the surface of the body, under the present circumstances, has often a greater and more immediate effect in rousing the sufferer than any other expedient, and should never be neglected. Much liquid should not be given with the view of hastening the vomiting; as, far from being useful, the malady is thereby aggravated. If it be supposed that the poison has been taken long enough to reach the intestines, the purgative clyster, No. 8, page 146, ought to be administered.

Vinegar and lemon-juice are the best antidotes to these narcotic poisons; but they must not be given till the stomach has been evacuated. After the poison has been altogether ejected, or nearly so, a cup of water, strongly acidulated with vinegar or lemon juice, should be given every five minutes, which may be alternated with a strong cup of coffee, or green tea; and the limbs be rubbed with a piece of flannel or a flesh-brush. The use of the coffee and acidulated water must be continued until the patient is out of danger. The dashing of cold water on the surface of the upper part of the body should likewise be continued till recovery is insured. The powers of the system must also be supported by giving ammonia, brandy, and other cordials. Half a tea-spoonful of the pure water of ammonia mixed in a small tea-cupful of water, has sometimes great effect in rousing the sufferer, and may be repeated frequently, according to the degree of stupor present.

When the drowsiness is extreme, and the disease resembles an attack of apoplexy, bleeding from the arm or jugular vein must be had recourse to.

Foxglove—Here vomiting should be excited by the exhibition of sulphate of zinc, as just advised for poisoning by opium, and after the poison has been evacuated, the vinegar and water recommended under opium should be given. Twenty or thirty drops of laudanum in a glass of brandy and water may also be administered frequently, or a little of the water of ammonia, as above recommended.

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Poisonous Mushrooms—The same treatment as advised under opium is proper here.

Prussic Acid—This is the most energetic of all known poisons, and when strong prussic acid is taken it destroys life before any succour whatever can be given. But when a large dose of the diluted acid has given rise to the symptoms detailed above, vomiting must be directly excited by the administration of a scruple of sulphate of zinc, as recommended for poisoning from opium. After the evacuation of the stomach, frequent draughts of strong coffee must be taken, and then, at intervals of half an hour, three or four table-spoonfuls of oil of turpentine mixed with the coffee. Brandy, water of ammonia, and other cordials, are also proper, to support the vital powers.

Animal Poisons

The venomous animals whose bite or sting is accompanied by symptoms more or less poisonous, are the viper, the rattle-snake, the Cobra di Capello, and other serpents found in hot climates. Some kinds of fish also occasionally prove poisonous, when eaten, particularly in tropical climates.

***Viper, Rattle-snake,* etc.**—The effects which follow the sting of these animals, are a sharp pain in the wounded part, which quickly spreads to all the members, and even to the interior of the body; great swelling, at first hard and pale, then reddish, livid, which appears gangrenous, and gradually augments; fainting, vomiting, and convulsive movements; the stomach is so sensible that it can retain nothing; a frequent, small, concentrated and irregular pulse; difficult respiration; copious cold sweats; disturbed sight; and the intellectual faculties are deranged. When the swelling is much increased, the small vessels no longer suffer the blood to circulate; and the pulse becomes hardly perceptible. When all the symptoms enumerated have acquired a degree of intensity, the patient dies.

The first thing to be done in these cases, if called early, is to give twenty or thirty drops of *pure water of ammonia* in a wine-glassful or a tea-cupful of water, or of water and white wine or brandy; then place a ligature rather tightly; immediately above

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the wound, and pour ammonia into the wound. Repeat the ammonia in half an hour. The ligature should not be so narrow as to irritate the skin; nor should it be continued too long a time, as it favours, if long continued, the development of gangrene. But the most direct and efficient means of counteracting the absorption of the poison is suction, and this is most effectually done by exhausting a cupping glass over the wound. The cupping glass must be applied as soon after the injury as possible, and kept exhausted until all danger is passed. It has been proved lately in France, that the bite of vipers, both on man and inferior animals, were rendered entirely harmless by the application of cupping glasses. Even the juice of the deadly Upas tree of Java, and prussic acid, have been inserted into wounds made in small animals, and the application of the cupping glasses has counteracted any deleterious effects. Dr. Barry, an English physician residing at Paris, has the honour of this valuable discovery.

If the cupping glass be not at hand, a mixture of equal parts of volatile alkali (pure water of ammonia) and oil, or strong ammonia itself, should be applied to the wound, and the swelled parts which surround it. When the principal symptoms are diminished, remove this, cover the wound with a rag dipped in sweet oil, and rub the limb from time to time with the same oil mixed with a small quantity of volatile alkali, in the proportion of an ounce of the oil to a tea-spoonful of alkali. If the swelling be very considerable, and the pain acute, remove the ligature. Scarifications should not be made. Hartshorn may be taken, and brandy, if the water of ammonia, is not at hand.

At the same time, the volatile alkali, (water of ammonia) must be given internally, in a dose of twenty or thirty drops in a glassful of water, every half hour in the beginning, if necessary, and afterwards every two hours.

If the case be urgent, as in the bite of the Cobra di Capello, or rattle-snake, the utmost dependence may be placed on a free use of the caustic volatile alkali (pure water of ammonia) both internally and externally, together with sound wine and brandy and water. Ammonia should be applied undiluted to the wound, and twenty, or even thirty drops taken in water every quarter of an hour, or as

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circumstances indicate. Free doses of the alkali are required. A tea-spoonful in water has sometimes been taken.

A glass of Madeira or Sherry wine, or brandy, may also be given frequently; and the patient is to be placed in bed; well covered, and perspiration promoted as much as possible. An emetic of twenty grains of ipecacuhana powder, or of sulphate of zinc, may sometimes be useful. If there be much bilious vomiting or jaundice, and gangrene continues to make progress, the decoction of bark should be given; a large wine-glassful of this decoction may be exhibited every three hours, mixed with twenty drops of volatile alkali. If, on the contrary, the symptoms diminish, and the individual enters into a state of convalescence, no solid food must be allowed during the first few days; but only a small quantity of light thin broth, with bread and light pudding.

The internal use of arsenic is also sometimes of eminent service in the bites of venomous serpents, but nothing is equal to ammonia. Twenty or thirty drops of the arsenical solution may be taken in water, or lemon-juice, every half-hour, during four successive hours; the purgative clyster, No. 8, page 146, being administered without delay, and the painful limb, or part, rubbed with a liniment, composed of half an ounce of, oil of turpentine, half an ounce of volatile alkali, and an ounce and a half of oil.

The guacho plant of America is very efficacious in counteracting the injurious effects of these poisons. The Indians make great use of it for this purpose, and it is invariably successful. They swallow one or two table-spoonfuls of the juice of this plant, and inoculate themselves with it in five or six wounds, which they make principally in the side of the chest; and between the fingers.

Scorpion and Centipede.—The sting of the European scorpion. is not very dangerous. It occasions serious danger only in those climates where the heat is excessive; it then produces a red spot of the size of a man's little finger nail, which gradually increases and becomes very black in the centre. This black spot is where the sting entered. The part swells and is painful, the inflammation is more or less considerable, and to these symptoms succeed alternate chills and fever, numbness, vomiting, hiccup and great trembling.

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The internal treatment should be that directed when speaking of the viper. The caustic volatile alkali in water *(aqua ammonia pura),* or spirits of hartshorn, twenty drops to a wine-glassful of water, will probably be the best internal medicine, and the same article pure, or mixed with oil, may be applied to the wound; of a poultice of linseed meal; or bread and milk, moistened with a tea-spoonful of the volatile alkali, may be laid over it, and renewed twice or thrice a day. Wine or brandy and water should also by given.

When the sting of the centipede proves very troublesome, it may be treated in the same way.

The sting of the *Wasp, Bee, Tarantula,* etc. occasions, in our climate, only a slight degree of pain and swelling. It is sufficient to rub the parts with a, mixture of one part of olive oil, and one part of volatile alkali. The same application is of great service in the stinging of the *Mosquito.* If the symptoms should, from any cause, run extremely high, it will be advisable to apply the caustic volatile alkali to the wound, and adopt the internal treatment advised for the bite of the viper.

Whenever the sting of the insect has been left, it is advisable to extract it.

Poisonous Fish.—Muscles, the dolphin, the congor eel, the king fish, and the yellow-bill sprat, and some other fish, may, under certain circumstances, occasion symptoms more or less serious, and even death has been known to be the consequence of their ingestion.

If experience proves that the fish we have named are sometimes poisonous, it also demonstrates that they are far from being so at all times, and to all persons. The individual who can eat them with impunity in our climate, and in all seasons, may be greatly incommoded by them in hot climates, and especially during the summer season.

The usual effects of such fish, when they disagree, are acute pain in the stomach and head, nausea, difficulty of breathing, general uneasiness, intolerable itching of every part of the body, a crimson eruption on the skin, fainting fits, sometimes convulsions,

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with a coppery taste in the mouth, and a burning sensation in the throat.

The yellow-bill sprat (*clupoea thrysa*), has caused horrible convulsions, inflammation of the stomach, and death at the end of half an hour.

In the treatment of such cases, the first object should be to evacuate the stomach by the administration of an emetic of twenty grains of sulphate of zinc, or half a drachm of powdered ipecacuanha, dissolved in a little water; and should the poison have been some time swallowed, so as to have passed into the bowels, administer the clyster No. 8, page 146, after the emetic has operated. Immediately after these remedies have taken effect, mix together two drachms of ether, a drachm of laudanum, and four ounces of mint water, or any fluid at hand, of which the patient should take a table-spoonful every quarter of an hour, or ammonia may be given. Besides which, mix two table spoonfuls of vinegar or lemon juice, in half a pint of water, and let this be taken as a common drink. If the symptoms grow alarming, the use of a little strong brandy and water, or good Madeira wine, with a few drops of volatile alkali in each draught, would be necessary. If there are violent and continued pains of the stomach, apply twelve leeches to the upper part of the belly.

DISLOCATIONS

When a bone is forced out of its proper situation, so as to impede or destroy its natural functions, it is said to be *luxated* or *dislocated.*

As this often happens to persons in situations where no medical assistance can be obtained directly, by which means limbs, and even lives, are frequently lost, I shall lay down a few of the most useful principles applicable to these injuries, and endeavour to point out the method of reducing the most common dislocations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after swelling and inflammation have come on, or

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after the bone has been out of its place for several days or weeks. When swelling and inflammation are present, it is difficult to know the state of the joint, and improper to attempt a reduction; and by waiting till they are gone off, the soft parts, and the bone itself, acquire a certain position, the muscles adapt themselves in length to the altered situation of the bone to which they are attached, and often cannot be lengthened sufficiently for it to be reduced.

The absolute immobility of a limb, or at least the inability of performing certain motions, is amongst the most characteristic symptoms of a dislocation. Sometimes, however, a considerable degree of motion continues for a short time after dislocation.

There are several important differences in dislocations, and the difference is immense, in regard to the danger of the case, arising from the circumstance of a dislocation being attended or unattended with a wound, communicating internally with the joint, and externally with the air. When there is no wound of this kind, the danger is generally trivial, and the dislocation is termed *a simple one;* when there is such a wound, together with the dislocation, the case is denominated *compound,* and is frequently accompanied with the most imminent peril. Some joints are much more disposed than others to compound dislocations. The accident is rare at the hip, shoulder, and knee, but is frequent at the ankle, elbow and wrist.

The following are some of the chief principles relative to the present subject, laid down by the late skilful Mr. Pott, formerly surgeon to Bartholomew's Hospital; and they merit great attention :

1. Although a joint may have been dislocated by means of considerable violence, it does by no means follow that the same decree of violence is necessary for its reduction.
2. That all the force used in reducing a luxated bone, be it more or less, be it by hands, towels, ligatures, or machines, ought always to be applied to the other extremity of the said bone, and as much as possible to that only.
3. That in the reduction of such joints as are composed of a round head, received into a socket, such as those of the

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shoulder and hip, the whole body should be kept as steady as possible.

4. That in order to make use of an extending force, with all possible advantage, and to excite thereby the least pain and inconvenience, it is necessary that all parts serving to the motion of the dislocated joint, or in any degree connected with it, be put into such a state as to give the smallest possible degree of resistance.
5. That in the reduction of such joints as consist of a round head, moving in a socket, for example, the shoulder and hip, no attempt ought to be made for replacing the said head, until it has by extension been brought forth from the place where it is, and nearly to a level with the said socket. All that the operator has to do in these instances is to bring the bone to this level; the muscles attached to it will, for the most part, do the rest for him.
6. That whatever kind or degree of force may be found necessary for the reduction of a luxated joint, such force should be employed gradually; the lesser degree being always first tried, and it being increased little by little.

With respect to the second maxim here laid down, I would remark, that Sir Astley Cooper states, that so far as he has had an opportunity of observing, it is generally best to apply the extension to the bone which is dislocated; but that dislocations of the shoulder are exceptions, in which he mostly prefers to reduce the head of the bone by placing his heel to the arm-pit, and drawing the arm at the wrist, in a line with the side of the body.

Extension may either be made by means of assistants, who are to take hold of napkins, or sheets, put round the part, at which it is judged proper to make the extension; or else a multiplied pulley may be used. In cases of difficulty, Sir Astley cooper thinks the pulley should always be preferred.

When the attempts at reduction fail in consequence of the muscular strength of the patient, which counteracts all efforts to replace the bone, or from several days having elapsed since the

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receipt of the injury, constitutional means should be employed in conjunction with those that are mechanical. The constitutional means here referred to are those which produce a tendency to fainting, such as bleeding, the hot bath at 100 or 103 degrees, and small quantities of emetic tartar to produce nausea, but not vomiting.

All that is necessary after the reduction of a simple dislocation, is to apply to the part cloths dipped in Goulard water, or spirit of wine and water, with a proper bandage, and to keep the limb perfectly easy.

In compound dislocation, the reduction must be effected without delay, and with as little violence and disturbance as possible, and then the wound is to be treated in all respects as any other wound in the same part. *See* page 328.

Dislocation of the Lower Jaw

The lower jaw can only be luxated in one direction, that is, forwards. When both sides are dislocated, the mouth is wide open and cannot be shut; and an empty apace is felt before the ear. When only one side is dislocated, the mouth is distorted, and turned towards the opposite side, while the fellow teeth of the jaws do not correspond.

These dislocations may be reduced in the following manner: The operator is first to wrap some linen round his thumbs, to keep them from being hurt by the patient's teeth, and then introduce them into the mouth, as far as possible along the grinding teeth. At the same time he is to place his fingers under the chin and base of the jaw, and while he depresses the grinding teeth with his thumbs, he raises the chin with his fingers, by which means the condyles become disengaged from their situation; at which instant the muscles draw those parts so rapidly back into the articular cavities again, that the operator's thumbs might sometimes be hurt, did he not immediately move them outward between the cheek and the jaw.

The patient must for some time avoid much speaking, and such food as requires much mastication.

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Dislocation of the Neck

Complete luxations of the first bone of the neck from the second are almost. inevitably and immediately fatal. Such a partial dislocation of some of the bones of the neck, however, sometimes occurs, as may be successfully treated. In this case the neck is bent, and the head generally falls forward on the breast.

Here the head should be gradually drawn up, whilst the shoulders are carefully pressed downwards by an assistant, until the bones are brought into their proper place; when the patient, if the injury has not been fatal, gradually recovers his senses.

The head may require to be retained in an elevated position by instruments contrived for that purpose.

Dislocation of the Collar-bone

The collar-bone may he dislocated either at its junction with the fore-part of the shoulder blade, or with the sternum or breast-bone.

In its junction with the breast-bone, it is rarely dislocated in any other way than forwards, when a hard circumscribed tumour is felt, or even seen, on the front and upper part of the breast-bone.

In the dislocation of this bone at its junction with the shoulder-blade, the nature of the injury is pointed out by pain at the top of the shoulder; a projection of the end of the collar-bone, under the skin covering the anterior point of the shoulder-blade; and a depression of the shoulder.

When reducing either of these luxations, the arms and shoulders of the patient are to be firmly drawn backwards and outwards, by an assistant, whilst the operator replaces the protruded end of the bone. A linen compress should then be placed on the point of dislocation, and a bandage applied, which is to go over each shoulder, and under each arm-pit. The patient's elbow should be kept close to his side, and the arm be supported in a sling.

Dislocation of the Arm

The humerus, or upper bone of the arm, may be dislocated in three

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different directions; *viz.* downwards, into the armpit; forwards, under the collar-bone; and backwards, on the shoulder-blade.

In every kind of dislocation of this bone, there is always a manifest depression under the anterior point of the shoulder; all the motions of the arm are painful, and limited; and the arm cannot move without the shoulder moving also.

In attempting the reduction of this luxation, the following plan of Sir Astley Cooper's should be resorted to, which he states to be the best, and generally successful, in three-fourths of such injuries, when recent. The patient should be placed in the recumbent posture, upon a table or sofa, and near its edge. The operator then binds a wetted roller round the arm immediately, above the elbow, upon which he ties a handkerchief. Then, with one foot resting upon the floor, he separates the patient's elbow from his side, and places the heel of his other foot in the arm-pit. The arm is then steadily drawn with the handkerchiefs for three or four minutes, at the end of which the bone in common cases is easily replaced. If more force be required, a long towel can be used, with which several persons may pull. The above distinguished surgeon generally bent the fore-arm nearly to a right angle with the upper arm (*os humeri),* because this position relaxes the large muscle *(biceps)* on the fore-part of the arm, and lessens its resistance; in many cases, however, he made the extension at the wrist, a plan in which he found more force requisite, but the bandage is less apt to slip.

Dislocation of the Elbow

The fore-arm consists of two bones, which may be dislocated together, back-wards or laterally. The radius, or upper bone, may also be alone dislocated, forwards, or backwards. The luxation of the fore-arm backwards is by far the most frequent. In this accident, the fore-arm is in a state of half-flexion, and every attempt to extend it produces acute pain; the point of the elbow, called olecranon, projects, and is higher than usual; and the extremity of the upper bone of the arm cannot be felt in the bend of the elbow.

It may be reduced by the following. method: the patient is to

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sit in a chair, and the operator placing his knee on the inner side of the elbow joint, in the bend of the arm, and taking hold of the patient's wrist, bends the arm. At the same time, he presses on the fore-arm with his knee, so as to separate them from the upper bone of the arm (the humerus); and whilst the pressure is kept up with the knee, the arm is to be forcibly, but slowly bent, and the reduction is soon effected.

When the bones are dislocated laterally, forcible extension of the fore-arm will in general be sufficient to reduce it.

Dislocation of the Hip

The head of the thigh-bone may be dislocated in four different directions, *viz.* upwards and backwards on the *ilium*; downwards into the *foramen ovule;* forwards on the *pubes;* and backwards on the *ischiatic notch.*

Dislocation Upwards and Backwards—In this case, the limb is from one inch and a half to two inches and a half shorter than its fellow; the thigh a little bent and carried inwards; the knee inclines more forwards and inwards than the opposite one; the leg and thigh are turned inwards; the foot cannot be turned outwards; and the natural roundness of the hip has disappeared.

In the treatment, the body of the patient must be first fixed by passing a strong belt or roller, etc. round the pelvis or hip, the ends being carried over the hip of the sound side, where they are either to be firmly held by assistants, or confined to some immovable body. A second belt is to encircle the dislocated thigh-bone, immediately above the knee, and with this extension is to be made in the direction of the line made by the limb, when it is brought across the other thigh a little above the knee. As soon as the head of the bone has been brought on a level with the cavity into which it is to be returned, by the assistants who are making the extension, the surgeon is to force it into the cavity by pressing on the large protuberance of the bone, called trochanter, which every one feels on putting their hand on the side of the hip; or the knee and foot may at this period be gently rotated outwards.

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Dislocation Downwards—This is next in frequency to the preceding dislocation. Here the injured limb is two inches longer than its fellow; the thigh is flattened; a hard, round tumour, formed by the head of the thigh-bone, is felt at the inner and superior part of the thigh; and the knees are widely separated from each other.

This kind of luxation is very easy of reduction. The pelvis having been fixed as above described, the necessary extension is to be made downwards, and outwards, so as to dislodge the head of the bone. The muscles then generally draw it into its natural cavity, on the extending force being gradually relaxed, if the upper part of the bone be pulled outward with a bandage, and an assistant at the same instant inclines the ancle inwards. Then the limb is used as a lever, with very considerable power.

Dislocation Forwards—The thigh-bone is occasionally dislocated forwards, or upwards and forwards on the pubes, when the whole limb is turned outwards, and cannot be rotated inwards; it is shortened by one inch; the head of the bone forms a tumour high in the groin; and the knee is generally carried backwards.

The treatment of this injury only differs from that just described, in the extension being made in a line behind the axis of the body, so as to draw the thigh bone backwards, and when such extension has been continued for some time, a napkin is to be put under the upper part of the bone, and its head lifted over the edge of the cavity into which it is to go.

Dislocation Backwards—In this case, the head of the thigh-bone is placed behind its natural cavity, and a little above its middle; the limb is generally not more than half an inch shorter than its fellow; the knee and foot are turned inwards, but not nearly in so great a degree as in the first kind of dislocation; the thigh inclines a little forward; the knee is slightly bent; and the limb is so fixed, that flexion and rotation are in a great measure prevented.

The pelvis being fixed, the extension is to be made downwards and forwards, across the middle of the other thigh, so as to dislodge the head of the bone, while the operator, with a napkin placed under the upper part of the thigh, just below the trochanter minor, pulls the upper part of the thigh-bone towards its proper cavity. In this case, pulleys are preferable for waking the extension.

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In dislocations at the knee, the situation of the displaced bone is obvious to the sight, and extension is to be made upwards by the thigh-bone, and downw aids by the fore-leg, while the bones are replaced by pressure with the hand.

Compound dislocations of the knee are serious accidents, but patience and cold wet bandages will work wonders.

FRACTURES OR BROKEN BONES

This subject is in many points an important one, but in a work like the present, little can be said respecting it, on account of the restricted size of the volume, and the more pressing nature of other matter. I shall, therefore, simply state those facts respecting the nature and treatment of fractures, which, from being of the greatest importance, will be the most useful to such persons as are desirous of assisting in the reduction and cure of a broken limb, when a skilful surgeon is not at hand.

Fractures are divided into *simple* and *compound.* By a simple fracture, surgeons mean a breach in the continuity of a bone, without any external wound. By a compound fractures they signify the division of a bone, where there is a corresponding wound in the soft parts, by which the fractured extremity of the bone becomes exposed. Of course, the danger attending a compound fracture is immeasurably greater than that of a simple one.

In the treatment of broken bones, the whole business of the operator consists in putting the displaced extremities of the bone into their natural situation again; in keeping them in this situation by means of a suitable apparatus; in endeavouring to avert unfavourable symptoms, and in adopting measures for their removal when they have actually occurred. The consolidation of a broken bone is, strictly speaking, the work of nature, and is effected by a process, to which a state of perfect health (humanly speaking) is above all things propitious.

The means employed for the reduction of fractures in general, are chiefly three, *viz.* extension; counter-extension; and setting. Extension signifies the act of pulling the broken part in a direction

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from the trunk, with a view of bringing the ends of the fracture into their natural situation. By counter-extension is implied the act of making extension in the opposite direction, in order to hinder the limb, or even the whole body, from being drawn along by the extending powers, which would then be unavailable. In all cases where the broken ends of the bone are displaced, as soon as the necessary extension has been made, the operator is to endeavour to place the broken ends of the bone in their natural situation, which is termed setting. One of the first principles to be attended to in the reduction of fractures, is to put the limb in such a position as will relax the most powerful muscles connected with the broken bone; because these muscles principally impede the reduction and disturb the ends of the fracture. The limb is, therefore, either to be bent or straightened, or turned a little to either side, as the nature of the case may point out.

After the bones have been put into their natural situation, time alone would complete their cure, were there not in the muscles a continual propensity to displace the ends of the fracture again. Hence the necessity of employing means for fixing the broken limb so effectually, that it may continue perfectly motionless during the whole time requisite for the union of the fracture. This indication is sometimes troublesome and difficult. The means employed for its fulfilment, are, an advantageous position; quietude; bandages; splints, etc. Whenever the case is a fracture of the lower limbs, the patient should lie strictly in bed until the union is complete; and the bed should be narrow, and consist of a horse hair mattress, or some other article that will not sink. A half-bent position of the limbs is the most natural and easy, and consequently, the best for fractures (excepting the broken thigh); and care must be taken that the broken limb is placed so that it may bear throughout its whole length, equally and perpendicularly upon the surface on which it lies, and not be only partially supported. It would appear, that the best pillows for the support of broken limbs, are those stuffed with chaff of oats; and in whatever position the limb is placed, it must be kept perfectly quiet.

A piece of soap plaster is the best application to the seat of injury in simple fractures, and over this an eighteen-tailed bandage

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may be applied rather loosely. This is a bandage consisting of several narrow strips of linen, long enough to encircle the limb, which are stitched to a long piece of linen running lengthways; and will, therefore, permit the limb to be examined without being removed. All tight bandages do harm.

But splints are the most efficient of all the applications made to a broken limb, with a view of keeping the ends of the fracture steady, and in a proper state of contact. They are usually made of wood, or strong pasteboard. In using them the object should be to preserve steadiness in the whole limb, without compressing the fracture at all. In the case of a broken leg, two splints only should be employed; they must reach above the knee, and below the ankle, and be so guarded with tow, rag, or cotton, as to press only on the joints. In the case of a fractured thigh-bone, the limb is now generally laid in a straight posture, when one splint should reach from the hip to the outer ankle, and another (somewhat shorter) from the groin to the inner ankle.

After having reduced the fracture, and applied a suitable apparatus for maintaining the reduction, means must be employed to prevent and remove any unfavourable symptoms. It is proper, therefore, in most cases, to allow for the first few days only very low diet, as broths, tea and bread. When the patient is young and strong, and the swelling and inflammation are considerable, bleeding from the arm to the extent of ten or twelve ounces should, perhaps, be practiced. In other circumstances, the cooling mixture, No. 81, page 183, will be sufficient. The patient may be permitted to drink as often, and as much as he likes, of any cooling acid beverage, as lemonade, etc. A very low diet is only to be continued for the first few days, unless great inflammation arise; for experience proves that this method when too much prolonged, has bad effects. Constiveness is to be averted by the use of the clyster, No. 8, page 146, or the mild aperient, No. 27A, page 155. When the bowels are relieved, a bed-pan should be carefully introduced under the patient, and a disturbance of the limb avoided as much as possible. The fracture-bed, invented by Mr. Earle, of London, is of much value in the present instances, as it enables the patient to void his faeces without the slightest change of position.

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It is an excellent plan for the first few days, to wet the bandages freely and frequently with cold water; for in this way, the tendency to inflammation and swelling may be considerably lessened, and the pain is relieved.

Compound fractures are to be treated much in the same way as simple fractures, except that the wound will require a treatment similar to what is proper for other wounds in the same part. If the wound is but slightly lacerated, its edges should be gently drawn together with a few short strips of adhesive plaster, after the fracture has been set. This will give it a chance of uniting without suppuration. But when the wound is so bruised and lacerated, as to leave no room for the hope of its uniting without the formation and discharge of matter, a small piece of soft lint should be placed lightly between its edges, and over this a pledget of lint spread with the ointment, No. 94, page 190, or some other mild digestive. In order to allay irritation and inflammation in the part, linen cloths, wet with the cooling lotion, No. 68, page 173, may be applied over them; or should great swelling or tension take possession of the limb, a warm bread and water poultice may be substituted. Should high inflammation, attended with pain, irritation, and fever, supervene, it may be necessary to bleed the patient, and certainly to keep the bowels open, and administer the fever mixture, No. 81, page 183, with or without the solution of acetate of morphia, or laudanum, as the severity of the pain points out. After the matter has been formed and let out, and the pain and fever subside, the lowering plan of treatment must be dropped, and the patient be supported with food of a light and nourishing quality, a little of the decoction of bark being, given twice or thrice a day, and the relaxing poultice changed for some mild strengthening lotion or ointment, as No. 72, page 174, or No. 95, page 190.

The practice of applying rags wet with cold water to *fractures and dislocations,* especially when accompanied with a wound, is now universally regarded by our best surgeons as excellent, and of the greatest importance to the relief and recovery of the patient. The rags should cover the whole wound, or, swollen part of the limb, and be re-dipped in the coldest water as often as they become dry. This is a simple expedient for reducing inflammation and

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swelling, but a very effectual one. It cannot be urged too strongly on the attention of all sufferers and their friends. In gun-shot wounds, indeed, in large wounds of every description, its soothing efficacy is great and immediate, and it assists materially in the favourable recovery of the sufferer. Many severe wounds will require no other treatment, provided the patient has at the same time perfect rest and a pure air. It is generally supposed that gunshot and other severe wounds require the use of elaborate medicaments, but nothing can be more unfounded. Rags kept constantly wet with cold water are alone sufficient, the edges of the wound being supported and kept in contact by strips of adhesive plaster. Stitching wounds is now rarely practised by skilful surgeons. Stitches are unnecessary and painful, and strapping with adhesive plaster retains the lips of a wound in contact much better; and the whole may be kept cool by frequently squeezing a sponge filled with cold water over the bandage or plaster.

SUBSTANCES LODGED IN THE GULLET OR IN THE WINDPIPER

The gullet is the tube which conveys the food from the mouth into the stomach. Foreign bodies frequently lodge in it, and by pressing on the windpipe, and thus impeding respiration, or by exciting great irritation in the gullet itself, are often attended with bad, and even fatal, symptoms. Hence, an immediate attempt must be always made to extract them. For this purpose, the fingers may be employed, and if they will not reach far enough, a pair of long carved forceps should be used. A bunch of thread with a multitude of nooses, fastened upon the end of a probang, or piece of whalebone, is well calculated for catching hold of small substances, like fish-bones, needles, etc. If this resource fail, a piece of dry sponge may be fixed on the extremity of a probang, or piece of whalebone, and passed into the stomach, and when expanded with moisture and withdrawn, will sometimes bring up articles, which, on its introduction, it had passed in its dry and diminished state. When the stomach is full, the excitement to vomiting has sometimes answered; but if the foreign body be sharp and pointed, it is rarely advisable.

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When the substances are not of a sharp, or otherwise very hurtful kind, and cannot be extracted, they must be pushed down into the stomach with a large bougie, or a long whale bone probang having a piece of fine sponge securely fastened to the end. But such practice is rarely advisable, when the foreign bodies have a sharp pointed form, like nails, pins, needles, etc. When surgeons have not ventured, or not been able to force such substances down into the stomach they have often made their way, after a time, to the surface of the body, where an abscess has been formed, out of which they have been discharged.

When the substances lodged in the gullet, can neither be extracted, nor pushed down into the stomach, if the breathing be not dangerously obstructed, and liquids can yet be swallowed, the wisest plan is to avoid irritating the passage with the further use of instruments, and leave the case to nature, that is to say, as far as manual interference is concerned; fur bleeding and the administration of mucilaginous oily draughts, may be often useful. But should the foreign body dangerously obstruct the breathing, and the substance itself cannot be felt externally, the patient would perish, if some means of facilitating the breathing, were not immediately adopted; and, under these circumstances, the most prudent plan would be to make an opening into the windpipe. This operation is neither difficult nor dangerous, and it is to be feared, that not a few persons have lost their lives under such circumstances, from its not having been performed. In those cases where the size of the foreign body is so large, as to indicate its situation by any hardness, or prominence in the neck, it might be more proper to make an incision in the gullet itself, for the purpose of its extraction.

The great art of passing any instrument down the gullet, for surgical purposes, consists in putting its extremity at office directly against the back part of the mouth, and, in passing it down, keeping it closely against the part it touches. The knowledge of this circumstance is extremely useful in passing probangs and bougies, etc.

It should be remarked, that after a sharp, hard substance has been either ejected, or propelled into the stomach by nature, or art, the same painful sensations in the throat frequently continue a

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certain time afterwards, which were experienced while the foreign body was actually lodged in the passage. These sensations, however, are only owing to the manner in which the bullet has been irritated, and, consequently, would be seriously aggravated by the further unnecessary introduction of instruments.

But pebbles, beans, or other small substances, may fall into the windpipe, as well as stick in the gullet, and this is far the worse accident of the two. The symptoms usually resulting from such a body getting into the windpipe, are immediate difficulty of breathing, severe convulsive cough, and a painful sensation in some part of the passage. In some cases, the violent cough produces convulsions in the limbs, and the difficulty of breathing is also attended with a rattling in the throat. Sometimes a perfect calm, at intervals, will follow the afflicting cough, during which time the patient will sit up, and appear cheerful and comparatively easy; which seems to arise from the foreign body's getting into a less sensible part of the canal. But this calm is deceitful, and should not allow us to delay having recourse to an operation, which is the only thing that can permanently and effectually relieve the patient in the present case. An incision must be carefully made, by a skilful surgeon, first, through the skin and muscles on the anterior part of the neck, and then through the rings of the windpipe, an opening being thereby made into some part of this canal, of such a size as to allow the offending body to pass out, which it then usually will by the simple efforts of the patient in coughing. Many children, who have let pebbles, or beans; fall into the windpipe, have been rescued from certain death by this operation; while others, in the same circumstances, on whom it has not been performed, have fallen victims to the ignorance and inattention of the medical attendant, or to the groundless fears of the parents. An *early* recourse should be had to the operation, for though the patient may live for several days with a foreign body in the windpipes, yet it must not be forgotten, that its presence there necessarily excites inflammation, and if the operation be too long delayed, the patient will often die of convulsions if very young, or of a consumption if older, at no long time after the extraction, of the foreign substance. The most skilful surgeon within reach should be obtained for the performance of this operation.

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MANAGEMENT
OF
INFANTS AND YOUNG CHILDREN

DENTITION OR TEETHING

The time of teething is a most important period of the infant state, and subjects it to manifold complaints and dangers, more especially in a sedentary mode of rearing children.

This period usually commences between the fifth and tenth months, and the process of the first teething commonly continues to the sixteenth at the least, and sometimes much longer. It almost invariably begins with the incisores, or front teeth of the lower jaw. Usually two of those are cut, and then the corresponding ones in the upper jaw. After two teeth in each jaw have appeared, it is, in some instances, a considerable time before the contiguous ones come out; but now and then six or eight are cut in hasty succession. The incisores are succeeded by the four molares, or grinders; then the canine, and the last of all of an infant's first teeth, their antagonists, or the eye-teeth; making in all sixteen. This is the ordinary number of children's first teeth, though it is sometimes exceeded.

In children who are strong and healthy, this process goes on pretty much as above described, and the teeth are cut both easily and soon; but in unhealthy and weakly infants, the process is slow and uncertain. Accordingly, children sometimes cut their teeth irregularly or cross, as it is called, both by the teeth appearing first in the upper jaw, and also at a distance, instead of being contiguous to each other, this is accounted an indication of difficult, or painful dentition: The ease or difficulty of teething may likewise be guessed at, by the circumstances under which the two first teeth shall happen,

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to be cut; the succeeding ones frequently working their way in a corresponding manner.

Dentition is commonly preceded and accompanied with various symptoms: the child drivels; the gums swell, spread, and become hot; there is often a circumscribed redness in the cheek, and eruptions on the skin, especially on the face and scalp; looseness; gripings; stools, green or pale, or otherwise discoloured; watchings, startings in the sleep, and spasms of particular parts; a diminution, or increased secretion of the urine, which is often of an unnatural colour; now and then a discharge of matter, with pain in making water; in almost all cases the child shrieks often, and thrusts its fingers into its mouth. Less common symptoms are a swelling of the tops of the feet and hands; the tumifying of one or more of the glands of the neck; and cough, difficult breathing and fits.

Hippocrates, the father of physic, has correctly remarked, "that infants cut their teeth more readily in winter than in summer; that such as are rather inclined to be lean cut them more readily than those that are very fat; and children who are loose in the belly most safely of all".

In the *treatment* of difficult teething, the last remark of Hippocrates is worthy of special attention, *the successful management of the process mainly depending on preserving a free state of the bowels.* This must never be lost sight of; and it is surprising how great and perfect a change will often be wrought in the case of fever, convulsions, and other alarming symptoms arising from teething, by procuring an open belly and improving the secretions by the use of minute doses of calomel and jalap. Whenever, therefore, the teething of a child is difficult or painful, give immediately a little rhubarb and magnesia, or four grains of compound jalap powder, in water or beer, and afterwards a tea-spoonful of castor oil daily, so that the bowels may be freely moved every day; to which add great attention to diet, which should be very simple, smaller in quantity than usual, and of the most digestible nature, with plenty of pure air, and exercise.

A very excellent medicine for children during teething is the *liquor potassae,* or *alkaline solution,* with rhubarb, as prescribed in this form :—

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Take of Liquor potassae, or alkaline solution . 1 drachm;
Infusion of rhubarb ..... 6 drachms;
Dill water ..... 7 drachms;
Simple syrup ..... 2 drachms.
Give the child one tea-spoonful twice or thrice a day.

If the fever be considerable, saline medicines, as in No. 24, page 153, will be of much service; and in case the symptoms are alarming, a little discharge should be obtained and kept up from behind the ears, by rubbing the parts with Spanish flies, or putting on a small blister. In all severe cases, the gams should be freely lanced, down to the top of the rising teeth. Some persons object to the lancing of gums, but the general opinion among the best informed of the profession is, that when much fever, or other constitutional affection, is present, together with swollen and inflamed gums, the imprisoned tooth should at once be set at liberty.

If a child, during painful dentition; is at the breast, the nurse's diet and bowels must be particularly attended to. Her diet should be very mild and diluting, and small in quantity. Ample directions will be found in the author's book on "INFANCY AND CHILDHOOD".

When a looseness comes on during this process, it must on no account be hastily checked. Unless it be excessive, it ought not to be interfered with; and even when excessive, it must not be stopped, but only moderated by the use of some simple thing, as three grains of the compound powder of chalk in a table-spoonful of dill water.

FOOD AND FEEDING

Ever keep in mind, that it is generally right to be sparing in the quantity of food; for over-feeding, as well as feeding improperly, are highly injurious.

A child in health will require only breast milk for the first four months, unless there is not a sufficiently early provision made by the breast of the mother for this purpose; then the child must have something given it, as near in composition as possible to the mother's milk, and we can scarcely recommend any thing better

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than a mixture of cow's milk, water, and loaf sugar, in the proportion of two-thirds milk, one-third water and a very small quantity of loaf sugar. For the fifth month nothing but this should be given, and very little, if any thing else, for the sixth month; afterwards it may stand in need of a small cup of beef tea and crumb of bread daily. At the end of eight months it should be fed twice a day, once with bread and milk, or biscuit powder and milk, and once with light broth and bread, arrow-root, or rice. At twelve months, it should be fed three times in twenty-four hours; and then more solid food should be likewise given daily, as a bread or rice pudding, or a boiled egg. For an infant taken early from the breast, the diet should principally consist of cow's milk warmed, water and loaf sugar, afterwards of bread, first soaked in water and of light broth with bread. If the child has a purging, the milk should be boiled.

After the first year, animal food in substance may be given twice a week to children. To those four or five years old, animal food may be allowed daily, and bread and milk night and morning. Particular care is, however, necessary, not to give nutriment in large quantities to children who take but little exercise, or to those who are weakly, for in such, an excess, or even a great variety of food, is apt to produce worms, convulsions, rickets, slow fever, scrofula and purging.

The generation of acid in the stomach and bowels is a common cause of disease in children. If a child at the breast be repeatedly attacked with the gripes, and falls away, the diet ought to be changed from milk to one consisting of broths, and sago or baked flour with milk; and to aid in preventing a return of the gripes, the chill should be exercised well in the open air, and the mother's health must be attended to. In this case, it will be proper also for the mother to live chiefly upon animal food. If this should not be effectual, apply for medical assistance. In general, the use of spice in children's food is to be reprobated; and, in illness, the diet of all children should be as light as possible. In fever, drinks containing nourishment, such as barley-water, toast and water, thin tapioca, and rice-water, will be proper, taken cold in summer and warm in winter. In obstinate purgings, children must have rice, arrow-root,

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and also hartshorn shavings boiled in beef tea, or beef tea thickened with baked flour, or sago and thick milk; and much good has been derived from putting a flannel roller round the body, when the purging resists these means.

DRESS AND DRESSING

It should be particularly noticed, that over-clothing, or clothing improperly makes a child tender and subject to cold.

A child requires fewer clothes than an adult: a short shift, and flannel waistcoat tied behind, with a short petticoat sewed to it, and a short gown, rather stouter in winter than in summer, is all the body-dress a child requires; more clothes only make it tender, chilly, and subject to colds, unless it is weakly, and then a flannel shirt is sometimes useful. Until an infant reaches the seventh or eighth month, it is best without stockings; neither can its petticoats be too short. The whole of the dress of children, whatever may be their age, should be perfectly loose and easy, so as to allow of free motion to the limbs. It is highly beneficial to expose the legs, arms, and breasts of healthy children to the open air.

EXERCISE AND SLEEP

Generally speaking, it is a good rule never to prevent a child from attempting to walk, however young it may be. When a child seeks to put its feet on the ground, let it do so, but do not force it to walk. This effort at exercise is both pleasant and serviceable to a child; it is proper to encourage it in this, and, as it grows up, regularly to exercise, but to avoid fatiguing it. Amuse and employ a child, but never suffer it to be still when it is right for it to be in motion and actively employed. In exercising any child, however, avoid fatiguing it, and particularly a sickly one; a weakly child ought not to be allowed to stand or walk long together; therefore, it should be alternately carried in the arms, drawn in a vehicle, and invited to walk. The practice of placing children in the damp ground, after fatiguing them with long walks, cannot be too much reprobated.

Until the third year, most children require an hour's sleep in

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the middle of the day, after which they should be invariably exercised till they begin to be tired, and may be put to rest at seven O'clock. In summer let them rise at six, and in the winter at seven.

AIR

It is indispensably requisite for children to bear, without inconvenience, the vicissitudes of the atmosphere. A free and countinued exposure to the open air is of the utmost consequence to children's health; the sooner infants are taken into it the faster they will thrive; in the open air they grow up strong, less subject to colds, disordered bowels, convulsions, and tickets; complaints so frequent among those children who are reared in nurseries. Not only the face, but the legs, thighs, and arms, should be freely exposed to the air. Even in confined streets, in the populous district of the metropolis, it is of infinite service to keep the children out of doors; and the poor should set open the bed-room windows and doors of their habitations. Those children who have been properly exposed to the air from birth, may be safely exercised in it, if healthy, at all seasons.

COLD BATHING

Frequent bathing is conducive to cleanliness, it imparts vigour to the muscles and nerves, and promotes alacrity and cheerfulness of mind. In a striking manner does the cold bath preserve and promote the health of the infant race. It is proper to begin the practice of dipping in warm weather, and to continue it through every season after. The cold bath is not only a serviceable appli-cation to children in health, but to those that are sickly also, especially the rickety; it may be resorted to thrice a week. A sudden dip, twice repeated each time of using the bath, will be sufficient. The more delicate and weakly require the chill to be taken off the water the first three or four times of going into it. If the shock of a cold bath appears too powerful for the constitution, partial bathing with salt water, or sponging the body with it, may be substituted, and is often highly useful. Sea bathing is preferred for those having the king's evil.

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Immediately after bathing lot the child be wrapped in a blanket, and well dried, and if it be disposed to sleep, allow it to do so; if not, it may be dressed and suffered to run about. Weakly children using the cold bath may wear a flannel shirt. Excoriations are effectually obviated by frequently washing the parts of the body subject to them with cold water.

What I have further to say respecting the management of infants and young children, will be best compressed into short rules, which it is highly advisable that every nurse should attend to.

Rules for the Mother and for the General Management of the Child during the First Month

1. Let her not permit herself to be persuaded from having her child put to the breast, so soon as she herself may be able to bear the fatigue.
2. Let her not delegate to another the sacred duty of nursing her own child, unless the reasons for so doing are insurmountable.
3. She must most scrupulously attend to the dressing and undressing, or even performing this herself, when her health and strength will permit this delightful task.
4. She should never, under any pretest of convenience, permit her child to be fed, so long as she can supply it with sufficient nourishment herself; and to secure to herself this important point, she should pay a scrupulous regard to her diet, and her exercise in the open air.
5. The dressing of the child should early engage the attention of the mother; it should always be made subservient to comfort instead of show.
6. This should consist in part of flannel; especially during cold, or even cool weather.
7. The dressings of the child should be changed as often as they become soiled, when this luxury can be indulged in.
8. Though it may be found that flannel is the most eligible substance as a general rule, there are cases in which it

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may be improper; and these should be carefully distinguished.

9. The belly band is one of the most important parts of the child's dress; it should always be made of flannel, and should be always cut *bias*.
10. The greatest care should be taken to apply it properly; and too tight an application should be particularly avoided.
11. If this bandage be applied too tight, it may produce the evil it is intended to prevent.
12. The child should be carefully protected against all unnecessary wet; and when it is discovered to be in this situation, it should be changed as quickly as possible.
13. In dressing the child as few pins should be employed as possible; three are all that are necessary, if the clothes be properly arranged.
14. As a general rule, the child should never be fed at this period of its life; there may be exceptions, however, that may render this necessary.
15. When an exception to this rule exists, the food of the child should consist of milk, water and sugar; as advised at p. 271.
16. If the child be fed, it should have but small quantities at a time, and never be crammed to surfeit.
17. The woman should exercise in the open air, as soon as this is rendered safe, by the state of her health, the period after confinement and the state of the weather.
18. She should never subject herself to *partial* exposures, under the hope of hardening herself.
19. The re-application of a diaper, after it has been dried simply, should be prohibited; as several evils arise from the practice.
20. The mother may indulge in such diet as her experience has proved to be innocent—for it will seldom or never disagree with the child, when it perfectly suits the mother.
21. When the mother experiences any inconvenience from the

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use of any substance or substances, she should not hesitate a moment to abandon them; for if they disagree with her, they will be sure to do so with the child.

22. Should there be a failure in the quantity of milk, the mother must not attempt to increase it by highly seasoned food and stimulating drinks.
23. She may, however, use, and sometimes with great advantage, the ordinary nutritious substances.

Rules Adapted to the Infant State

1. Use a child early to the boat or spoon—in case of illness, or of a failure of milk from the breast of the mother.
2. Keep an infant dry and warm—to preserve health, promote growth and obviate chafing.
3. Feed an infant in an upright posture—to give uniform distention to the stomach, and thus to obviate indigestion and gripes.
4. In the act of suckling it is proper to take a child frequently from the breast for a minute or two—to obviate too rapid a distention of the stomach, which occasions puking or acidities.
5. Expose an infant early in the air—to strengthen and enable it to withstand colds, and to obviate purging.
6. Attend invariably to cleanliness in an infant—to prevent diseases of the skin, slow fever, rickets and decline.
7. Let an infant's dress be loose and easy and free from pins—to avert accidents, glandular obstructions and impediments to growth.
8. Place an infant, when asleep, on the right side—to favour the descent of the food into the bowels, and to obviate indigestion.
9. Attend strictly to plaintive cries—by this means you may trace the first cause of illness; for an infant will never cry, if well and at ease.

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10. Wash a *strong* child in cold water, and dip it thrice a week–wash *a weak* one in chilled water—to refresh, promote healthy perspiration, and prevent diseases of the skin.
11. Encourage a child to stretch and thrust out its limbs, and to crawl about—to teach it active habits early, to strengthen it and promote the circulation.
12. Rub a young child, night and morning, all over with the hand—this exercises it and promotes the circulation of the blood.
13. Comb a child's head and wash it frequently with soap and water—to prevent scald head, and painful eruptions behind the ears, and on the neck.
14. If a child has cut four teeth, if it is in good health, and its bowels are regular, wean it at nine months, without any previous preparation-do this to obviate numerous inconveniences both to the mother and child.
15. If a child has been lately weaned, and is attacked with hooping-cough, or any other severe disease, it may require the breast again—it will be thus supplied with the diluting nutriment, which it would then stand in need of; or should a weaned child, to which is offered suitable food, fall off in its health, decline and pine away, it may be prudent to procure for it a good breast of milk, and to let the child suck again–to obviate an exhausting fever, which will inevitably prove fatal.

    N.B.: This rule, however, must not be invariably adopted; and ought always first to have the sanction of an able professional man.

16. An infant should have three or four stools daily, of a bright orange colour—a deviation from this appearance denotes acidities and indigestion, requiring the prompt exhibition of a little rhubarb and magnesia, with or without a small quantity of the sulphate of potash. *See* the prescription, No. 121, page 205, and consult the author's book *On Infancy and Childhood.*

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Rules Adapted to Childhood

17. If a young child takes but little exercise, give it but little solid food, increasing it in proportion to the exercise taken-to obviate thirst, fever, head-ache and glandular obstructions.
18. Should a child's breath smell, it is commonly a symptom of a disordered stomach, or of worms. Should its belly grow large, its complexion become pale, and flesh soft, disease has already commenced. In either of these cases the child will require a good free air, and not only domestic but medical management. The prescription No. 121 will be useful.
19. *In a fit*—untie the clothes, raise the head, wipe away all froth from the mouth and keep it open, pressing down the tongue and drawing it forward at the same time. Let the child be first quickly exposed to cool fresh air and its face sprinkled with cold water; then gently rub, with a warm hand, the belly, back and limbs; apply a succession of warm flannels to them or resort to a warm bath, and. put warm tiles under the arm-pits; strike the soles of the feet smartly with a piece of flat wood, tickle the nostril, and inside of the ear, with a feather or tooth-pick. To an infant give five drops of harts-horn or sal volatile, in a little water; to a child two years old, ten drops in a little water.

N.B. :Remember, though no sign of life appears, it is necessary for two hours to act upto these directions. Do not suffer the head to hang back, nor to lean forward upon the chest.

Cautions Adapted to Infancy and Childhood

1. Never let an infant sleep alone at night in cold weather—for fear of suspending the breath and the circulation of the blood.
2. Never let an infant sleep the whole night on the mother's arm—for fear of suffocation.

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3. Never wake an infant out of a sound sleep by rough means—for fear of producing fits or a purging.
4. Avoid the use of tight bandages, especially round the body—for fear of producing fits, obstruction of the bowels or decline.
5. Avoid giving Godfrey's Cordial, Daffy's Elixir, or any other warm anodyne—for fear of producing fits, fever or palsy, a common consequence of quack medicines, indiscreetly given.

   N.B.: Dalby's Carminative is a safer medicine than either of the foregoing, but it is objectionable from its containing laudanum, and a great deal of essential oil. In general, it is far inferior, as a remedy, to syrup of rhubarb, mixed with a little calcined magnesia and dill water. *See* recipe, pages 334.

6. Avoid giving any quack medicine—for fear of bringing on decline or sudden death.
7. Avoid feeding infants in the night—for fear of bringing on the gripes, and even worse complaints, from over distention of the stomach.

   I know a lady of rank who was so fond of feeding her infants, that she would have them taken up for this purpose, several times in the night. The consequence was that she lost all her children at the age of from twelve months to two years.
8. Avoid warm nurseries and close air—for fear of making a child delicate, weakly and susceptible of cold.
9. Avoid carrying a child always on the same arm—for fear of making it crooked.
10. Never confine a child's limbs by wrapping its clothes tightly round it, especially at night—by inaction of the muscles, and retention of moisture, the child will become weak and sickly.
11. Avoid exposing an infant to the open air, in a cold season, when its bowels are disordered or if it has shortness of breathing, with fever and cough—for fear of bringing on high inflammation.

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12. Never allow a child's food to be chewed—it is not only a nasty practice, but if the nurse has a sore mouth or gums, she may communicate disease.
13. Never provoke violent laughter, nor disregard violent crying, for fear of a fit in either case.
14. Never wash a child with milk, with a view to heal a chafed part–milk will inflame, and cold water will heal it.

N.B. : In the author's volume ON INFANCY AND CHILDHOOD, that is THE MANAGEMENT AND DISORDERS OF CHILDREN, the present subject is fully considered.

The proper management of females in pregnancy, and immediately before, in, and after confinement, will be found in the author's TREATISE ON THE DISEASES OF FEMALES.

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GENERAL PRINCIPLES
IN
THE TREATMENT OF DISEASE
Specially Worthy of the Attention of Heads of Families and also of Junior Medical Practitioners

1. Remember that the restorative powers of nature are great, very great; and consequently many disorders will be cured by time, mild diet, cheerful conversation, rest and pure air, without medicine. This is true of many medical disorders and equally so of many surgical complaints, such as affections of bones and joints.

2. Rest, joined with exercise, cheerful society, cleanliness, pure air, and a mild diet of easily digested food, are, therefore, among the most powerful means of cure.

3. In illness, it is in general a capital error to look chiefly to medicine for cure. A strong tendency exists in many diseases to a spontaneous favourable termination. Therefore, if we do not do wrong, they will get well under the use of rest, cleanliness, pure air, good diet and a little saline aperient.

4. On the other hand, some diseases are curable only by medicine. Here, in prescribing the appropriate medicine, in the right dose and manner, the skill of the physician is often strikingly displayed, and the patient certainly, and sometimes speedily recovers. An instance of this we have in giving ammonia in scarlet fever, measles and erysipelas, bark in ague, alkalies in rheumatism and muriatic acid in typhus fever.

5. Saline medicines are of great value in all *acute* diseases, such as fevers and inflammations. They should never be neglected. They relieve thirst, quiet the pulse, moderate fever, and obviate

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the liability to obstruction in the minute vessels, that is, the minute arteries and veins, and improve the quality of the blood. For examples, refer to No. 27B, pore 156; No. 81, page 183 or No. 130A, page 209.

6. Ammonia, such as No. 78D, page 181, has a peculiarly favourable effect—a specific influence—in all cases of erysipelas, scarlet fever and measles. *See* also page 4.

7. IN FEVER, bleeding is not advisable when the pupils are dilated.

8. IN FEVER, never give opium when the pupils are contracted.

9. Never take a full dose of opium, so as to force sleep, when the *complexion is dusky, and the lips in any degree blue.* The cheeks and lips should remain florid in order to its being safe to take laudanum, solid opium or paregoric, in cough or any other complaint.

10. Except in fevers and acute inflammations, and diseases of the joints, EXERCISE is fever a powerful and principal remedy. I wish my readers always to bear this in remembrance, and to act upon it, although in some particular complaints I may not recommend it. Exercise acts on all the functions and processes; it is a natural means of freeing the skin, and promoting vital changes in the blood when passing through the lungs and liver; hence its remarkable power in almost all diseases not of an acute character. And it is of immense importance that sufficient daily exercise should be taken. More will be required in winter than in summer. Although some exercise may be taken daily, yet an *insufficient* quantity will not preserve from disorder or disease, neither will it assist in throwing it off. Therefore, the actual quantity of exercise taken daily is a matter of primary importance to every one.

11. At the onset of severe SORE THROAT of every description, an emetic, or two, of antimony and ipecacuanha is followed by great relief. It unloads the vessels of the throat and chest, and determines to the surface of the body, and should never be neglected. *See* No. 123, page 206.

12. Calomel, blue pill, mercury with chalk, and other preparations of mercury, generally operate most beneficially in

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small or minute doses. By small or minute doses, I mean about one-tenth of the ordinary dose, say of calomel, one-tenth of a grain; of blue pill, one or two grains.

13. In liberal doses mercury causes the destruction of the red globules of the blood–thus reducing its vitality. Hence in large doses calomel, blue pill, and other mercurial preparations, are irritating and destructive. In order to avoid or lessen the injury likely to follow on taking large doses of this destructive medicine—mercury—you must supply nutritive material, by giving good food freely. However, in small doses, they are often soothing, both to the membranes and whole body.

14. Calomel and other forms of mercury, are commonly given freely in all AFFECTIONS OF THE LIVER. Nothing can be more unsound and injurious, especially when feverishness is present. Saline remedies, such as No. 74D, page 178, or No. 130 A, page 209, are far safer and more efficacious.

15. The BLOOD is the common thoroughfare for distribution of good and evil to the whole body. An unhealthy state of the BLOOD is the most fruitful source of disease, both acute and chronic. It is the first element in fevers, and often also inflammation; and it produces congestion, degeneration, and other serious states in the lungs, kidneys, liver and other internal organs.

16. In all DISCHARGES OF BLOOD from the lungs, stomach, bowels, or any other internal part, saline medicines, and the neutral salts, are among the best remedies, and are frequently in the highest degree efficacious; and I particularly recommend a combination of cream of tartar, sulphate of potash, and nitre, as in the prescription No. 130A, page 209. This is a remedy admirably adapted to domestic practice, on account of its mildness and efficacy.

17. *Costiveness* is not to be conquered by aperient medicine; but by diet, exercise, and a regular patient solicitation of nature every morning.

18. The *general principles of treatment* are the same in all chronic complaints, whether they are organic diseases or only disorders of function; but weakening measures must be more cautiously guarded against in actual disease, than where the

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functions only are deranged. *The general principles of treatment* are :

(a) That the secretions throughout—that is, all the natural discharges of the body,—are to be restored to as healthy a state as possible, by mild measures.

(b) That we are always to keep in view the relief of irritation, and the improvement of the quality of the blood, as two of the most important indications.

(c) That while we are aiming to fulfil these indications, the strength of the patient must be maintained and augmented to the utmost, by a generous diet, and by daily and sufficient exercise, as well as by tonic medicines.

It has certainly been too much the practice in all chronic maladies to overlook or disregard the *third* principle, while aiming to accomplish the objects described in the *first* and *second,* from which circumstance many patients lave necessarily suffered greatly for a time, and some permanently, as the mischief done by too low a diet, with bleeding, too strong purging, mercury or other active lowering measures, could not for a long time be perfectly surmounted, and in some instances never have been overcome.

19. Deficient vitality—imperfect nutrition of the body—lies at the basis of disease. That is, debility, either general or local or both, with impaired vital powers and impoverished blood, lie at the foundation of the existing malady, whatever may be its name, character, or seat. I 'therefore, in all diseases, except active inflammation, it is of the first consequence to increase the appetite, and strengthen the digestive powers. By this means a large majority of curable cases of disease will be cured, for the restorative power of the stomach is immense.

20. The more wear and tear the body or mind sustains, the more quickly do the various parts of the system melt down into fluids, or substances, which are quickly removed, as effete, by the excreting organs—the skin, kidneys, liver etc. Hence, this wear

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and tear demand corresponding new supplies, in order to new material being formed.

21. In all diseases, both acute and chronic, the real immediate cause of a languishing state, and continued debility, is the non-renewal of the BLOOD by the supply of fresh matter. If the blood is dark coloured and half dead, it cannot properly fulfil the functions of life. You must therefore always attend to the supply of nutriment—not by over-stimulating and throwing in a large quantity of food, but by taking small quantities of food at regular intervals of about four hours in chronic complaints. In fevers and some inflammations, you must give food every two hours. This is a *general principle* of great moment, always to be acted upon, although I may not always insist upon it in every disease here treated of.

22. It is consequently of the first importance to attend to the living constituents of the BLOOD, especially to the *red globules,* the number and integrity of which are usually in direct measure to the bodily and mental vigour. The principal means of improving the quality of this precious fluid are exercise, pure air, nourishing food, sufficient sleep, iron, bark, cod-liver oil, and ammonia.

23. In the DELIRIUM OF FEVERS, whether mild or violent, few remedies are so suitable and efficacious as Dr. Graves's Mixture (No. 78B, page 180), of tartarized antimony.

24. Remember that MIND has much to do with producing many complaints—disappointnoent, vexation, losses, domestic affliction, are fruitful sources of debility and disease. Then moral treatment is absolutely necessary, and time and change of scene must be alloyed for the subsidence of the mental irritation.

25. SELF-GOVERNMENT possesses great power over disease. Fretfulness and impatience increase the action of the heart and arteries, and impair the action of the skin, and thus aggravate bodily diseases. While resignation to the Will of God, and a cheerful spirit, have effects of the very opposite kind, and we cannot suffer from any complaint which is not relieved by their salutary influence. "*A merry heart doeth good like a medicine; but a broken spirit drieth the bones*". Prov. xvii. ch. 22 verse.

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NATURE, SYMPTOMS, CAUSES, DISTINCTION AND TREATMENT OF DISEASES

AGUE OR INTERMITTENT FEVER

AGUE, or intermittent fever, is a fever consisting of paroxysms, or periods of fever, between each of which there is a distinct and perfect intermission from febrile symptoms. There are several kinds or species of ague, but the *quotidian,* which returns every day; the *tertian,* which returns every other day; and the *quartan,* occurring on the first and fourth day, are the principal. It is likewise termed autumnal ague, when it happens in antumn and *vernal,* when in spring.

Every fit of ague, consists of three stages— a *cold,* a *hot* and a *sweating* stage. In the cold stage the face and limbs become pale, the features shrink, and sensibility is greatly impaired, the breathing short and anxious, and a sensation of a severe cold is felt over the whole body, succeeded by shivering and violent shaking. Afterwards, the heat of the body returns, and soon becomes dry, burning, and much above the natural standard; the countenance is now flushed and tumid; there is often acute pain of the head, sometimes slight delirium; the pulse is strong, full, and frequent, and the thirst urgent. These symptoms are followed, first, by moisture of the skin, and then by a universal and equable perspiration, which terminates the fit. The whole paroxysm generally occupies about eight hours.

In the intermission the countenance is apt to be pale and shrunk, and the constitution in general to be affected with languor and

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feebleness. In the commencement of agues, however, the patient is sometimes free from indisposition.

Spring agues are, in general, less severe and obstinate, and less liable to be followed by dangerous consequences, than the autumnal; they are also less liable to return. Quartan agues, which generally commence in autumn, often do not cease till spring. If quotidian agues lengthen their period, and change into tertian, it is a good sign; but the mutation of a disease of a long interval into a shorter one, denotes the increasing severity of the malady. Thus, a quart-an ague is not dangerous, but if it be converted into a quotidian, it is then very dangerous.

The chief predisposing *cause* is debility, however induced; but the grand exciting cause is *marsh miasma,* or the effluvia arising from stagnant water, or marshy ground, impregnated with vegetable matter in a state of putrefactive decomposition. Dampness, and the night air, are particularly favourable to the full operation of marsh miasma. Ague does arise, however, from other causes than marsh effluvia; and it may be produced by sympathy, or irritation in the stomach and intestines.

TREATMENT.–On the commencement of the actual fit, the patient should be placed in bed between the blankets, and partake freely of warm diluting, but not stimulating drinks, as water-gruel, barley-water, etc., and laudanum may be given in a little cinnamon or simple water. Laudanum is useful here, probably on account of its stimulant properties, and therefore a large dose should be given, not less than from forty to sixty drops. I think the best time to give it is an hour before the fit is expected, but it is often likewise useful after the commencement of the hot fit.[1]

1. "The mode of giving it (laudanum) just at the commencement of the cold stage, shortens this stage very much, and renders the whole paroxysm milder; facts of which patients are so conscious, that our soldiers in the Peninsular hospitals regularly applied for an ague-draught, (sixty drops of laudanum and a drachm of ether in water), when they saw their nails turning blue, which is generally the first sign of the commencement of a paroxysm."—*Cyclopoedia of Pract. Medicine, vol.* 1, p. 226.

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One scruple of sesqui-carbonate of ammonia, with eight grains of compound powder of ipecacuanha, and an ounce and a half of mint water, form a draught of excellent service in moderating the attack, when given on the invasion of the cold fit, instead of laudanum.

In the intermission, the principal indications of treatment, are to cleanse and strengthen the stomach and bowels, and to invigorate the general habit. Peruvian bark is well known to be, in general, the most efficacious medicine in the cure of ague; but previous to its exhibition, the stomach must be cleansed by the use of an emetic, consisting of twenty grains of ipecacuanha powder, and after that has ceased to operate, the bowels should be evacuated by giving one of the pills, No. 97, page 191, washing it down with a full dose of the purging mixture, No. 73, page 176. The sooner the bark is commenced after these operations the better. It is most efficacious in the form of powder, and in large doses, administered at short intervals. An ounce of the best bark powder may be divided into eight doses, and a dose taken every hour or every second hour. When the interval between the fits is short, it must be administered immediately after the paroxysms, and continued till the return of the next; on the other hand, when the intermission is long, its exhibition should be delayed till within six or eight hours of the time at which the cold fit is expected. It must invariably be continued for some days after the attacks disappear.

If great debility prevail, the bark must be combined with wine and aromatics; each dose may be taken in a large wine-glassful of old port, with ten grains of sesqui-carbonate of ammonia or a scruple of aromatic powder. If it occasion purging, add three or four drops of laudanum to every dose; if costiveness, mix the dose with a scruple of powdered rhubarb occasionally. When nausea and oppression attend its use, twenty or thirty drops of the diluted vitriolic acid is an excellent addition to each draught.

In very obstinate agues, the bark will sometimes be more efficacious, if mixed with strong brandy and water, or combined with serpentaria. *See* page 114.

Quinine is the active principle of Peruvian bark, and is often

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still more valuable than bark itself, inasmuch as it operates more quickly, with greater certainty, and in a smaller compass than the latter. It is equal to the removal of the most inveterate cases, and will sometimes cure this disease after bark in substance has failed. Three or four grains of the sulphate of quinine, made into a pill with a small quantity of extract of gentian, may be taken in the same way as the powdered bark; and after the disease is removed, one of these pills should be continued twice a day, for a week or two, to prevent a relapse. This medicine is particularly useful in the ague of children, as it may be administered to them almost without their tasting it, and when they could not be prevailed upon to swallow bark in any other form. It is an article which enjoys the confidence of the whole medical profession.

Should the pulse be hard and strong, and other inflammatory symptoms be present, as pain in the side, etc., this state must be reduced, before giving the bark, by a low diet, and particularly by taking away eight or ten ounces of blood from the arm; since pounds of bark have been given, under such circumstances, without effect, when the disease has yielded readily after the loss of a little blood.

The two foregoing remedies are, in general, by far the best for intermittents of every kind; where they fail, arsenic or cob-web are the best substitutes. In Lincolnshire, and other counties where this fever is very prevalent, arsenic is much employed, and with great success; but it is a remedy of so active a nature, as to be fit to be taken only under the care of a medical practitioner, and then it ought never to be employed till other and less deleterious medicines have failed. Four drops of the arsenical solution, gradually increased, if necessary, to six or eight drops, twice or thrice a day, will speedily cure the most obstinate agues. It is seldom advisable, or requisite, to continue its use beyond ten days, or a fortnight.—See *Arsenic.*

Cob-web is an old and popular remedy for the present fever, and it is as efficacious as popular. Some writers speak of it as a mere dirty object of vulgar superstition; but they are much mistaken, for ten grains of cob-web given twice or thrice before the expected time of each paroxysm, and continued in this way for three or four

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days, or longer, as circumstances indicate, will be found a powerful mean of putting an immediate and permanent stop to the recurrence of the ague. The patient should, however, be prepared for its use by the previous employment of an emetic, and purgative, as prescribed before beginning the bark. The only valuable cob-web is that produced by the black spider, which inhabits cellars, barns and stables. It is sometimes very effectual in arresting the progress of the febrile symptoms in every other kind of fever. Dr. Jackson, a physician of acknowledged accuracy, and great experience in the treatment of fevers, observes that it is more abrupt and efficient in its operation than bark, or arsenic, or any other remedy employed for the purpose, with which he is acquainted.—*Dr. Jackson on Fever*, p. 241.

One of the reviewers (a physician) of the first edition of this work, although he was pleased to speak very favourably of it, expressed strong doubts of the utility of cob-web, and wished it to be expunged from the book, but I have too solid a foundation for the opinion given respecting it above, to change my sentiments on the subject. Indeed, so highly do I think of it that I hope it may be of service to insert here an extract from Dr. Jackson's observations on its value in remittent fever, and in typhus. Dr. Jackson was for fifty years in the medical department of the army, and during that period treated fevers of every kind and every grade, at home and abroad, equally under the burning sun of the West Indies, and on some of the most swampy plains of Europe. He was well known to the profession as one of the most attentive and accurate observers, as well as one of the most judicious practitioners. *See* also page 116. He says,—

> "I think I may venture to say that the cob-web prevents the recurrence of febrile paroxysms more abruptly, and more effectually than bark, or arsenic, or any other remedy employed for that purpose with which I am acquainted. The cob-web was rarely given before the subject was prepared by emetics, or purgatives; and given to a subject so prepared, it seldom failed to effect a cure comparatively permanent; relapse or conversion into another form of disease, being, upon the whole, a rare occurrence where the disease leas been suspended by

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this remedy. If it was not given until the paroxysm was advanced in progress, the symptoms of irritation, viz. tremors, startings spasms and delirium, if such existed as forms of febrile action, were usually reduced in violence, sometimes entirely removed. In this case, sleep, calm and refreshing, usually followed the sudden and perfect removal of pain and irritation. Vomiting, spasms and twitehings in the bowels, were also usually allayed by it, there was no effect from it where the vomiting or pain were connected with real inflamunation or progress to disorganization. In cases of febrile depression, deficient animation, and indifference to surrounding objects, the exhibition of eight or ten grains of cob-web was often followed by exhilaration; the eye sparkled; the countenance assumed a temporary animation; and though the course of the disease might not be changed, or the dangers averted, more respite was obtained from a pill of cob-web than what arises from or belongs to the action of wine, opium or ally thing else within my knowledge."

When this disease proves unusually obstinate a somewhat different plan may be pursued. In the case of a quatan, in St. Thomas's Hospital, which had lasted two years, Dr. Fordyce prescribed ten grains of the compound powder of ipecacuanha, with a scruple of carbonate of ammonia, (which may be taken in any aqueous vehicle), two hours before the paroxysm was expected. It succeeded perfectly. A profuse perspiration followed the use of this draught, and entirely prevented the cold fit; bark was next freely given, and this obstinate ague was cured in a few days.

Ten grains of sesqui-carbonate of ammonia, or fifteen grains of salt of tartar, with a scruple of chamomile flowers, in powder, and an ounee and a half of mint water, form a draught that has often been found of superior advantage in particular cases of ague which had resisted the employment of the bark. It may be given every fifth or sixth hour during the intermission.

When an ague is accompanied with a sallowness of the complexion and pain, tenderness or swelling about the region of the stomach or liver, indicating the existence of some internal obstruction or disease, the altertive pill, No. 98, page 191, should be taken every night for some time, in order to its removal. In very

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swampy situations; especially in hot climates, obstructions and disease of the bowels, liver or spleen, are very apt to arise in protracted agues; when the bark will often disagree, and it will be necessary to substitute some other bitter for it, as gentian, quassia, chamomile, or serpentaria. In such cases give ammonia with the bitter, as in No. 82 or 83, page 183-84. The compound powder of ipecacuanha will be found very serviceable as an adjunct to the bitters. Five grains may be taken every night or oftener, and the alterative pill, No. 98, at bed time must not be omitted.

With respect to diet, if, in the commencement, the pulse is hard and strong, and the face flushed, these inflammatory symptoms will require a spare mild diet; but debility generally prevails, and then it ought to be as full and generous as the stomach will easily bear, observing to take that food which affords the most nourishment with the least irritation, as roast mutton, chicken, eggs, bread and good wine.

All agues are very liable to return from the operation of slight causes, the patient will, therefore, find it necessary to avoid exposure to marsh miasma, and all other sources of debility. If he lives in a part of the country where swamps and fens are numerous, he should take a dose of the sulphate of quinine twice a day, for three or four weeks, occasionally, particularly in the spring and autumn, and carefully avoid exposure to the night air.

BROW-AGUE is a form of periodical pain affecting the upper part of the face and forehead, which is cured most certainly with bark and ammonia, and daily exercise. *See* 84B, page 185.

APOPLEXY

Apoplexy, or an apoplectic fit, is a sudden suspension of the powers of sense and motion, from some diseased affection of the brain, or nervous system, the respiration being generally laborious, and frequently attended with a stertorous noise. It is strictly a disease of the nervous system.

We are sometimes warned of the approach of apoplexy by a dull pain in the head, accompanied by a sense of heaviness;

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giddiness; drowsiness; frequent fits of night-mare; fulness and redness of the face and eyes; obscurity of sight; bleeding from the nose; faltering in the speech; ringing in the ears, and loss of memory; but its attack is more frequently sudden, and the patient falls to the ground with scarcely any warning, and lies as if in a deep sleep, from which he cannot be roused.

In this state, his breathing is laborious, and generally accompanied by stertor, the face is red and puffed, the veins of the head and neck are distended, the head is hot, and often in a copious perspiration, the eyes are prominent, blood-shot, sometimes half open, but more frequently quite closed, the pupils dilated, and a frothy saliva is often excreted from the mouth. The pulse is at first regular, strong, full, and slow, but soon becomes weaker, frequent, irregular and intermitting. The pupils of the eye are commonly dilated, but they are now and then much contracted.

The duration of a fit of apoplexy is various; but it generally lasts from eight to twenty-four hours, and occasionally to thirty-six hours or still longer.

There are two varieties of apoplexy, which are in general clearly marked, the one attended with a hard full pulse, flushed countenance and generous breathing; the other with a feeble pulse and pale countenance. The former usually occurs in persons of a full plethoric habit, and considerable energy and strength; the latter, for the most part, in the cold, phlegmatic and feeble.

Generally speaking, the latter form of the disease is the most dangerous, since, from the general failure of the energies of life, nature has less ability to assist us in the use of our remedial measures. In other points of view, the degree of danger will be generally measured by the violence of the symptoms. In general, the shorter the fit the more favourable the prognosis.

It is very doubtful, whether the sudden deaths we so frequently hear of, ought to be ascribed, as is common, to apoplectic seizure, since genuine apoplexy very seldom destroys life in less than two hours. They appear to depend rather upon some violent affection of the heart or stomach or upon the rupture of some blood-vessel larger than those of the brain.

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The most common immediate cause of apoplexy is pressure on the brain, either from an effusion of blood or serum, or from a distention of the vessels of the brain, by an accumulation of blood in them, independently of effusion.

Whatever operates in determining a great quantity of blood to the head, or in impeding a free return from it, may produce excessive distention or effusion within the cranium, and be, therefore, reckoned as exciting causes, such as violent passions of the mind, immoderate exercise, intense study, fits of intemperance, excessive straining, ligatures about the neck, the suppression of accustomed evacuations, as piles, etc., unrestrained indulgence of the appetite, and exposure to sudden and great heat, or to excessive cold. Some enlightened professional men think that fatty disease of the minute vessels of the brain is the immediate cause of sanguineous apoplexy.

This disease may happen at any age, but is most frequent about the middle, or in the decline of life, especially in persons of a plethoric habit, who have short necks, and who are indolent, and indulge much in eating and drinking.

Apoplexy is *distinguished* from epilepsy, or falling fits, by the presence of convulsions and contortions of the limbs in the latter, by the comparative shortness of the fit, and the greater facility with which the patient is roused.

In deep intoxication, the breath is in general tainted with the intoxicating liquor, and the patient may be in some degree roused by shouting in his ear, and by applying a strong stimulant to the nostrils.

TREATMENT.–Although, in systems of physic, it has been usual to divide this disease into the two varieties of *sanguineous* and *serous;* the former arising from the effusion of blood, the latter from the extravasation of serum; yet it is very doubtful whether these distinctions have any real foundation in experience or observation. But, in treating this disease, it is unquestionably proper and necessary to attend to the following modifications, namely :

1. *Apoplexy occurring in the vigorous and plethoric.*

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2. *Apoplexy attacking a constitution infirm by nature or enfeebled by age, intemperance or excessive exertion.*

1. In the former case, blood-letting, both general and local, active purgatives by the mouth and in clysters, and the free application of cold to the head, form the best remedies; but in the apoplexy of the infirm, or enfeebled, it is better wholly to abstain from drawing blood in any way, and much purging is injurious.

In all cases of the disease, the patient should, if possible, be immediately carried into a spacious apartment, into which cool air may be freely admitted; his head and shoulders should be placed in an elevated position; all ligatures, especially those about the neck, must be speedily removed, and the legs and feet should be placed in warm water, or rubbed with the stimulating embrocation, No. 45, page 163.

When the disease occurs in a full habit, with a flushed face, and the pulse full and strong, a pint or two of blood should be immediately drawn from the arm, or jugular vein, and a dozen leeches may be applied to the temples, or the patient may be cupped on the back of the neck. Immediately subsequent to these operations, a copious purgative clyster, as No. 8, page 146, quickened by the addition of four ounces of infusion of senna, should be exhibited, which may be followed by active purgatives, administered by the mouth as soon as the patient is able to swallow. The powder, No. 120, page 205, washed down with a full dose of the mixture, No. 73. will be proper. The head may, at the same time, be covered with linen rags, wet with cold water, vinegar and water, or pounded ice. Should the patient not be able to swallow the ordinary purgatives, ten grains of calomel, and two of powdered gamboge, mixed with a little jelly or sweet butter, may be placed on the root of the tongue.

Unless the first clyster operates well, it ought to be quickly repeated, which may likewise be observed with regard to the purgative powder. In the commencement, the purgative medicine should be repeated every day, and afterwards every second or third day, for some time.

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A mustard poultice, as No. 4, applied to the feet, is a proper measure in the beginning, and sometimes a useful one. Some practitioners recommend blisters, but they are of doubtful advantage.

An emetic is seldom advisable or safe, unless the fit has come on soon after a hearty meal, when it ought to be the first thing resorted to.

Dr. Watson's advice is sound. He says,—

> "If the pulse be full or hard or thrilling, or if there be obvious external signs of fulness about the head, yon must abstract blood. You are not to refrain from bleeding the apoplectic patient because he is pale, if the pulse warrants it, nor may you omit taking blood if the face be turgid, although the pulse be small, for that smallness may depend upon organic disease of the heart. On the contrary, if the skin is pale and cold, and the pulse flickering, you would probably insure your patient's death if you withdrew from the failing heart and blood-vessels a portion of their natural stimulus"–the blood.

Dr. Baillie, after recommending the treatment above laid down, says, "If the patient should recover by these means, the best plan of management, in order to escape from another attack, is to live almost entirely throughout future life upon vegetable food, and to abstain from wine, spirits and malt liquor. It will be of considerable advantage to avoid any strong, or long continued exertion of the mind. In a few instances, when the full state of the vessels of the brain had for some time subsided, I have derived considerable advantage from the moderate use of tonic medicines, and more especially of steel." —*Baillie's Posthumous Writings,* p. 168.

2. In the *second variety* of apoplexy, which is the disease of an enfeebled constitution, mild invigorating means alone should be employed. The system pursued should be restorative, and I would begin with the draught, No. 35A, page 158, keeping the bowels regular with a little of the mixture, No. 74 A, page 176, a dose of which may be taken daily, or as occasion may require. At the end of a week or ten days, a more decided tonic may be given, such as No. 35 page 158, or No. 82 or 83 page 183-84. When the patient is

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recovering, a change of air and scene may be resorted to with the prospect of considerable advantage. Much of the treatment recommended for *Indigestion* will be useful here.

Numerous cases, both of apoplexy and paralysis, occur where the symptoms depend upon irritation alone, or on loss of nervous power or on a deficient circulation of blood through the brain, and in which the loss of the smallest quantity of blood is always injurious, and invigorating means are indicated. This fact ought never to be lost sight of.

There are many cases of apoplexy continually occurring, in which, at the time of seizure, there are present symptoms of deficient vital energy of the brain and constitution, although considerable corpulence may exist, or general appearance of strength; thus *in the commencement of the attack, and before reaction has supervened,* the countenance may be pallid or sunk, the pulse of the arteries of the neck weak or small, the temperature of the head not greatly increased,—and in such cases we must not bleed until reaction has followed, but administer gentle stimuli, as sal volatile and water internally, apply the volatile salts to the nose, and dash cold water freely over the head and face. After the patient has recovered a little, the face becomes flushed, and the arteries of the neck manifest an increased action, we may then order blood-letting with great safety and advantage. A useful case illustrative of this practice is found in Dr. Copland's, *Dictionary of Medicine,* p. 103. He says,—

> "Travelling in the summer, in one of the short stages, I sat opposite an aged and corpulent man who, very soon after our leaving town, suddenly lost his consciousness and power of motion. His countenance became first pale, then bloated and inexpressive, his breathing slow and slightly stertorous, all his muscles completely relaxed, and he fell in a few seconds upon those sitting around him. We were only a few doors from a chemist's shop; the coach was stopped, and he was carried thither. He was now profoundly, apoplectic; a copious perspiration flowed from his face and forehead, the veins of which were distended, and all his senses were completely abolished. There was no sign of hemiplegia,—but there was a general

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and complete loss of motion and sensation. His neckcloth having been removed, the pulsation of the carotids was found to be slow and of natural strength and fulness. Whilst he was held in a sitting posture in a chair, cold water was poured gently over his head from a sponge, and his head frequently sponged with it, volatile salts also were held for a short time, and at intervals to his nostrils. The power of deglutition was at this time abolished, so that it was impossible to administer a draught, chiefly consisting of a small quantity of spiritus ammoniae aromaticus, and camphor mixture, which was prescribed. In a very few minutes his consciousness returned, he took the draught, and, in a short time afterwards, he walked to a coach, in which I accompanied him home. He now complained only of a very slight confusion of ideas, with scarcely any head-ache, but his carotids beat more firmly. One full-blood-letting and an active purgative were now directed. The next day he was perfectly well, and has continued so. What would have been the result if he had been largely blooded previously to the reaction?"

After recovery, the diet may be a little more generous than what would be proper in the convalescence of a plethoric subject from an attack of this disease. The tonic pill, No. 102, page 196 or No. 104A, may be advantageously alternated with the strengthening draughts above noticed. It is a common practice also to recommend the external use of stimulants, as No. 45 or 46, which may be freely rubbed down the spine, over the arms, and on other parts of the body alternately.

As a preventive, the tartar emetic (*see* page 48-49) merits much confidence. Indeed, this medicine will often aid materially in the cure of the apoplectic patient.

Those who, from their constitutional robust make, are disposed to the present malady, ought to be very attentive in observing a mild spare diet, and regular habits; they should rise and retire early, take no strong drink, excepting, perhaps, sometimes, a little good home-brewed malt liquor; they should keep an open state of the bowels, and use a great deal of active exercise in the country. A seton in the nape of the neck, or between the shoulders, is often a valuable preventive, and highly merits the attention of those who have had one attack of apoplexy.

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In recovering from an attack of apoplexy, strict attention to diet and regimen is of the utmost moment, and I shall, therefore, conclude this article with some of the most important rules relating to these points. It has been correctly remarked, that the recovery of health and strength, after the disorder has been in a measure subdued, requires, (and often for a long period of time), unceasing attention to minutiae.

1. Having the head shaved frequently, or at least washing it daily in cold water, are practices worthy of much regard. Frequently rubbing the head with a flesh-brush, dipped in cold water, is very beneficial. The scurf on the skin is thus votrid rid of a proper perspiration promoted, and the head can be ept much cooler.

2. As soon as it is practicable, it is highly expedient to use the shower bath, with cold or tepid water, at least occasionally, as the means of propelling blood from the head.

3. A strong flesh-brush ought to be applied for ten minutes, night and morning, to the feet and arms, with the view of giving, tone to the skin and muscles, and augmenting the *quantum* of daily exercise. Scarcely any thing is of such decided benefit in drawing the blood to the extremities as a cold foot-bath daily, about eleven o'clock—*See* the Appendix. A servant must rub the feet constantly while in the water. If the speech be affected, a very likely means of obtaining relief is by the application of a hard flesh-brush to the throat, as often in the day as may be convenient; and rubbing under the chin with the fingers. See what is said of *friction* at page 279.

4. The breathing of pure air is of the utmost importance to health; and for that purpose, the improved mode of ventilation, by pulling down the upper sashes, and having a wooden conductor, by which the air is made to strike against the ceiling, cannot be too strongly recommended. By this means the room occupied by the patient may be kept constantly cool in the summer, and in the winter an occasional recourse to it will prevent any stagnation of air in the apartment, and carry off superfluous heat.

5. The clothes should be kept loose (especially about the neck, the wrists and the knees), and light for the sake of easy conveyance. It is not difficult, by using Shetland stockings, etc., to combine warmth with lightness.

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6. In regard to diet, at breakfast, a moderate quantity of milk may be taken, if it agrees with the patient, with hard baker's biscuit, or rusks or stale or toasted bread, which are both more agreeable to the stomach, and excite its digestive powers better, than common bread. If costive, toasted brown bread, especially with a little rye flour in its composition, will be preferable. Barley-meal porridge or gruel, might also be occasionally taken; or tea for a change. No coffee on any account.[1]

Luncheons ought to be entirely given up. For dinner, (about two o'clock), take a single plateful of light soup or broth, and then a moderate quantity of pudding, made of pearl barley, rice or bread. Pearl or pot-barley affords excellent nourishment. When ground into meal, it may be made into scones or cakes (prepared with milk), which are wholesomer than fermented bread. A little fowl or mutton or white sea-fish, in particular whitings and fresh herrings, is allowable once or twice a week for a change. The wholesomest fruits, as strawberries, gooseberries, grapes, currants, apples and oranges, may be taken, but never after the stomach is filled. Stone fruits are to be avoided, except perhaps peaches. Remember to eat slowly, and to masticate well what is eaten.

For drink whey, (more especially clarified, as the French *"petit lait"),* gum water or toast and water, carefully made, are to be preferred. Ginger or spruce beer, likewise may he taken; but no wine nor spirits, even with water. Spirits, in particular, are rank poison here. A very little mild *homebrewed* malt liquor may be tried.

A late *tea* or *cocoa* may be taken to prevent the necessity of supper, which ought to be given up, or indulged in very sparingly.

7. With respect to sleeping, a mattress is to be preferred; the head should be raised, and very lightly and thinly covered; the

1. "Coffee is decidedly injurious where there is an apoplectic tendency. Some eight years ago, a gentleman in this city (Philadelphia), of a strongly developed apoplectic habit, was seized with an attack of this affection. He was in the habit of taking large quantities of very strong coffee twice daily. I advised him to leave off taking this beverage enthely. He did so; and has not since experienced even the ordinary premonitory symptoms of the complaint."—Dr. Eberle's *Practice of Physic,* vol.2 p. 25, 1831.

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pillow to be stuffed with horse-hair instead of feathers. A habit of retiring to bed early, and rising very early, ought to be studiously cultivated.

8. Daily exercise is of the first importance, more particularly if the patient be of a full habit. *Without,* walking much on level ground, surveying the beauties of Nature, and directing the operations, but not joining in the labours of gardening, are practices highly advisable. The management of a greenhouse, and attention to the culture of plants, are excellent means of occupation. These should be alternated with gentle horse exercise. In regard to *"in-door amusements"*, neither billiards nor cards are to be recommended, from the anxiety they occasion. Books of an amusing, instructive and religious nature are proper, and the company of the cheerful, serious and well informed, ought to be cultivated. Daily friction and percussion most not be forgotten.

Religious exercises ought not, by any means, to be omitted.The infallible pen of inspiration assures us, that *"Godliness is profitable for all things"*, it means that it is *pre-eminently* profitable, and these exercises will afford consolation and hope, when every other means of relief are sought for in vain.

9. Quit large towns and cities for the open elevated country.

On the whole, it is hardly possible, where the constitution is not gone, or the frame in a state of decay, that a careful attention to all these particulars, will not be productive of the most essential benefit.

ASTHMA

This disease consists in a difficulty of breathing, for the most part temporary, and occurring at uncertain periods, accompanied with a wheezing sound, and a sense of constriction in the chest, with cough and expectoration. At first view it seems to be a disease of the lungs, and these organs are, no doubt, often primarily and chiefly affected; but it is as certain, that in some instances there is no positive disease of the pulmonary organs; the difficulty of breathing, and other symptoms present, denoting deep-seated mischief in the

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lungs, arising secondarily and sympathetically from severe disorder in other important parts, as in the heart, and especially in the stomach and bowels. The late Dr. Heberden alluded to this in saying, "It is observable in pulmonary consumption where the whole lungs are diseased, and where a great part of them has been destroyed, that patients have indeed a shortness of breath upon motion, but not any of the violent fits of suffocation which belong to asthma; while in examining the lungs of asthmatic persons after death; there has sometimes appeared no hurt obvious to the senses which could account for the difficulty with which they had performed their office".–*Commentaries,* page 80. Asthma is a disease of the latter period of life, and is very difficult of cure.

The real nature of the difficulty of breathing, called *asthma,* is now much better known than it was even a few years ago. It is evident that there are three distinct and principal causes or sources of this disease, *viz.* 1. *Dry cough;* 2. *Organic disease of the heart, or large blood-vessels;* 3. *Disorder of the nervous influence simply.*

1. By *dry cough* is meant an habitual thickening or congestion in some part or other of the mucous membrane of the lungs. It is particularly remarkable in the smaller branches of the bronchia, or air passages, and it is reasonable to suppose that if this swelling and thickening takes place beyond a certain degree and extent, it will obstruct the passage of the air, more or less completely, and thus give rise to asthma.

2. Organic disease of the heart, or large blood-vessels, gives rise to asthma, by causing an extension of disease to the lungs, and by occasioning an irregularity in the transmission of blood through them.

3. In some instances of asthma there exists, as Dr. Heberden remarks in the above extract, no sign whatever of vascular congestion or thickening, or of any other organic lesion; and then we can attribute it only to disorder of the nervous influence simply.[1]

1. Many persons of a susceptible constitution cannot sustain a lively emotion, whether from physical or moral causes, without being immediately seized with a difficulty of breathing, and in some it is intense. This is what is meant here by disorder of the nervous influence simply. This is the chief or only form which a *nervous attack* assumes in many women—the circulation being

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It is commonly divided into two species, the dry spasmodic, or nervous asthma; and the humid or habitual asthma. In the former, the fit is sudden, violent and of short duration; the constriction on the chest very hard and spasmodic; the cough alight, and the expectoration scanty, and only appearing towards the close of the fit. In the second species, or habitual asthma, the paroxysm is gradual and protracted; the constriction of the chest is heavy and laborious; the cough severe, and more or less constant; the expectoration commencing early, soon becoming copious, and affording great relief. The spasmodic asthma is comparatively a rare disease, not one case occurring for, perhaps, fifty cases of habitual asthma.

Asthmatic paroxysms are usually preceded by languor, flatulency head-ache, drowsiness, pale urine, disturbed rent, and pain in the head. Soon a sense of tightness and stricture is felt across the breast, with distressing straitness of the lungs, impeding respiration; the difficulty of breathing continues to increase; both inspiration and expiration are performed slowly, and with a wheezing noise; the speech becomes difficult and uneasy; a propensity to coughing succeeds, followed by the most anxious difficulty of breathing; the patient is threatened with immediate suffocation, and is obliged instantly to rise from a horizontal position. The face is sometimes turgid, and of a livid hue; at others it is morbidly pale and shrunk. These symptoms continue for a

(*Contd.*)

frequently not at all affected. Again, the difficulty of breathing which is so easily produced by the slightest exercise in very fat subjects, is also in great part nervous, and may be chiefly attributed to the great expenditure of nervous influence required to move a mass so disproportioned to the ordinary powers of motion.

In examples of impeded respiration, whatever was its cause, we have frequently seen its violence lessened by the patient merely shutting his eyes. We see the same thing is many other pains in different parts of the body, and particularly in pains of the stomach and intestines, (it may be so intense as to simulate those of inflammation,) which the patients could remove or induce at pleasure, by merely opening or closing the eyes, or by turning them to or from a bright light. In such cases it seems probable, that the effects can only depend on the stimulation com municated to or subtracted from the brain by the *light*; and, consequently, that disorder of the nervous influence simply, without any organic lesion, may give rise to diffculty of breathing, as well as other nervous affections.

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longer or shorter period, when they gradually decline, the fit being generally terminated by an expectoration of mucus. Notwithstanding the violence of the assault, it is very seldom that asthma proves fatal at the time.

In spasmodic asthma, the patient frequently soon recovers from the fit, if we except the effects of weakness left behind, and when the weather is warm and favourable, may continue for weeks or months free from difficulty of breathing or cough; but in the humid habitual asthma, although weeks may be sometimes passed without a severe fit, yet the sufferer, for the most part, labours under a continual difficulty of breathing, accompanied with a wheezing noise and more or less cough.

The exciting *causes* are numerous, and among the chief of them we may reckon, hereditary predisposition,—cold and moist atmosphere,—sudden changes of temperature, removal from a healthy spot in the country to a crowded and populous city—suppression of long acustomed evacuations–mechanical constriction of the chest. Yet all these may be resolved into an irritation of some kind or other, existing within the cavity of the chest, and stimulating its moving powers to a convulsive constriction; or to speak with still more precision, in all cases the exciting cause is an irritant of some kind or other, acting on the too sensible membrane of the bronchia. In such instances, the asthma is a primary affection originating in the chest; but we have already remarked that this disease not unfrequently occurs secondarily, and as a mere symptom or result of some other complaint, or of a diseased state of some remote organ, as the stomach, bowels or liver, when it is only to be removed by removing the disorder on which it is dependent. Hence, it is of the utmost importance that we should trace out the actual cause, so as to determine whether it has its seat within the chest or in a more remote part.

The asthmatic attack itself, as above remarked, seems to be the immediate consequence of a spasmodic affection of the minute bronchia, that is the minute terminations of the windpipe. These terminations, though minute, are possessed of a set of completely circular muscular fibres, and it is very conceivable that the

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spasmodic contraction of these fibres may be carried so far, as to obstruct the air-passages to such a degree as to prevent the transmission of air to a great portion of the lungs.

When once asthma is established, a recurrence of the fit may be readily excited by any excess or imprudence in diet, or any unusual exertions of body or mind. The occasional causes of attacks of asthma are almost always of a kind to give occasion to an immediate and evident disturbance of the nervous influence. Whatever greatly deranges the functions of the stomach and bowels will prove a powerful cause of exciting the fits; and though this disease is not, generally speaking, immediately dangerous, frequent returns of it are liable gradually to induce incurable diseases of the heart or lungs and thus to occasion a fatal termination. These facts evince the importance of an unceasing attention in avoiding the constitutional or occasional causes of this affection.

TREATMENT.–I shall consider first the treatment proper during the paroxysm or fit; and then that which is suited to the intervals. The former is of course, only palliative, and adopted with the view to shorten the duration of the asthmatic fit, and render it less severe and painful during its continuance; while the latter is sometimes curative, and the object in resorting to it, should be to lessen or remove the diseased condition of the lungs, or other parts on which the malady depends, and thus to free the patient altogether from a subsequent repetition of the attacks, or to weaken their force, and lengthen the intervals between them.

When the fit is on, or felt to be coming on, the patient should be brought near a large fire, and the feet and legs be immediately immersed in warm water; he should drink frequently of some mild diluting liquor made warm, as barley-water, or very thin gruel, into a pint of which, two tea-spoonfuls of ether or of aromatic spirit of ammonia, may be put; and if there be much pain about the chest, the part may be fomented with hot flannels, or bladders of hot water. The draught of henbane and nitric acid, at page 371, will sometimes be very useful. Some recommend laudanum, or Battley's solution, but opiates do not usually agree. I think very highly of the mixture No. 78A, page 180, or two of the following pills may be taken every hour :

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Take of James's powder, (Newberry's)..... 10 grains;
Ipecacuanha powder ..... 4 grains;
Camphor, scraped ..... 12 grains;
Extract of henbane, a sufficient quantity to form the mass, which is to be divided into six pills.

Sir John Floyer and Sir John Pringle, both of whom were able physicians, confidently recommended coffee, and the latter eminent practitioner says, that it is the best abater of periodic asthma that he had seen. The best Mocha is to be preferred, which should be newly burnt, and prepared very strong immediately after grinding it. It may always be obtained in great perfection at Dakin and Co.'s, No. 1, St. Paul's Church Yard.

Most patients are aware of the approach of a fit of asthma, by certain premonitory signs, and whenever these signs present themselves, the immersion of the feet in warm water, drinking of warm slops, with the use of a mild aperient draught, as No. 27A, page 155, should *immediately* be resorted to, as the fit will thereby be frequently prevented.

An emetic, of twenty grains of ipecacuanha powder, is often attended with peculiar advantage on the accession of the fit, and may be beneficially employed afterwards, once in three or four weeks. The emetic determines to the surface of the body, promotes expectoration, greatly relieves the chest, and is a measure much approved by the generality of the most experienced physicians; but if the patient is averse to it, he may take instead three grains of compound ipecacuanha powder, made into a pill with conserve of roses, every second or third hour, till the fit abates.

See what is said of the value of spider's web in relieving the paroxysm of asthma, page 116.

The inhalation of ether will sometimes give perfect relief during the paroxysm, but it is a remedy not without danger, and should never be employed except under medical superintendence. It can be tried by heating a common tea-pot with boiling water, and, after pouring the water quite off, put a tea-spoonful or two of ether into the pot, shut the lid down close, and let the patient inhale the fumes by putting the spout into his mouth, and breathing in that way for

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several minutes. This may be repeated frequently if it agrees, and the severity of the disease makes it desirable; or the vapour may be inhaled from a pint of boiling water, poured upon half an ounce of camphor, balsam of tolu or extract of hops. This should be put into an inhaler. A simple and efficacious way of inhaling ether is to put two tea-spoonfuls in a saucer held in the lap; while a shawl is thrown over the shoulders, and brought round in front so as to envelope the upper part of the body. Thus, the ether can be inhaled so as to produce a delightfully soothing effect.

If the bowels are confined on the accession of the fit, they should be relieved by the exhibition of a laxative clyster, as No. 8, page 146, or by administering a dose of the aperient mixture, No. 73, page 176; but purging is almost invariably to be avoided.

I have known strong brandy and water afford more relief than any other thing during the fit. Dr. Dawson, of Bishopwearmouth, writes in favour of gin and water; indeed, he states that sufferers from the dry spasmodic asthma have, under his own observation, derived a cure from gin and water, when all medicines and every other kind of spirits, had completely failed.—*Dawson's Practice of Physic,* p. 331.

Dr. Bree, the author of an approve work on disordered respiration, advises the following draught to be taken every three hours during the paroxysm. "Many patients", says he, "who had taken the most powerful antispasmodics, have assured me that none had been so useful; and two gentlemen, now under my direction, inform me, that it is the only medicine that has ever given them relief in the fits".

Take of Extract of henbane	3	grains;
Diluted nitric acid	30	drop;
Tincture of squill	15	drops;
Water	1½	ounce.

Mix them together.

Asthma is frequently observed in *middle-aged* and *elderly* persons, to take on much of the character of a slow inflammation

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and obstruction in the lungs, being attended with a good deal of pain in the chest, feverishness and hard pulse, especially in the winter and spring; and then, says Dr. Bree, seneka is the most certainly useful medicine that I have tried. In such cases, while the feverishness continues, it must be united with a saline, as three drachms of the solution of acetate of ammonia, to an ounce and a half of decoction of seneka, to be taken three or four times a day. When the feverishness gives way, it should be combined with squill and ammonia, which will be found to promote expectoration, perspiration, and urine in a powerful manner.

Take of Decoction of seneka	1½	ounce;
Vinegar of squill		half a drachm;
Solution of acetate of ammonia	1	drachm.

Mix for a draught, to be taken three or four times a day.

The mixture No. 78A, or 78 D, page 180-81 will also be very useful in asthma, complicated with obstruction.

Dr. Copland says *(Dict. of Practical Medicine,* p. 148), " The distilled laurel water or the prussic acid, particularly the latter, is often productive of much benefit in the paroxysm. I have found it of great advantage, when given in from two to four drops at the accession of the paroxysm, and in small doses in the intervals, particularly when the disease is attended with much irritability of the stomach and flatulence. It may be conjoined with camphor, ipecacuanha, etc".

It is a too common practice among some persons to bleed the patient during a severe asthmatic fit, but unless there is great fulness of habit, with a tendency to inflammation, it should never be resorted to; for it greatly augments the subsequent weakness, without mitigating even the present severity of the disease.

During the intervals of the fits, the most valuable medicines are ammoniac, assafoetida, squill, seneka, ipecacuanha, preparations of zinc or steel, mercurial alteratives, and the *lobelia inflata,* combined with such a diet and regimen as are calculated to invigorate the digestive functions, the organs within the chest, and

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the constitution at large. In some cases, where no inflam-matory symptoms are present, the following pills are very serviceable.

Take of Gum ammoniac, gum assafoetida, of each 1 drachm;
Powder of ipecacuanha ..... 15 grains;
Peruvian balsam, a sufficient quantity to form the whole into a mass, to be divided into thirty pills.

Two or three to be taken twice or thrice a day.

Or these :

Take of Compound squill pill ..... 1 drachm;
Powder of ipecacuanha ..... 12 grains;
Purified Turkey opium ..... 3 grains;
Camphor ..... 1 scruple.
Mix them, and divide into twenty pills. Take two pills three times a day.

When the patient is fully recovered from the fit, either of the stomachic medicines, Nos. 102, 103, 104 or 104 A, pages 196-97 will frequently be found eminently useful. Some persons will derive most advantage from the pills No. 102, and others from the No. 104 or No. 104 A or No. 106 A, page 198. Those patients who are soon heated by tonics, and those in whom they readily excite head-ache, will derive the greatest advantage from the pills 104 A or No. 106. These pills have more of a tonic property than No. 104, and will be more suitable than steel to such persons as have just been described on account of their not being so heating.

The compound tincture of Benjamin, when good, is sometimes a useful medicine, and may be taken to the extent of thirty or forty drops, three times a day, in mucilage.

I have already adverted to the value of occasional emetics, of ipecacuanha powder, in the intervals. They are almost invariably useful, especially in habitual asthma, and may be had recourse to occasionally, provided the patient is strong. Fifteen or twenty grains of ipecacuanha powder is a proper dose. Ipecacuanha and camphor are remedies applicable to all the forms of asthma, and to all conditions of the system at the time of the attack.

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There can be no doubt that asthma may frequently be much relieved by the skilful employment of mercurial alteratives, and I believe it possible even to cure some cases of the disease, both in its habitual and spasmodic form, by such means. The most superficial observer, who has seen many cases of asthma, must have often perceived it to be closely connected with a deranged state of the digestive organs, and symptoms of internal obstruction, when the efficacy of mercurial preparations is considerable. Therefore, under such circumstances, I would advise the pill No. 98, page 181, to be taken every night, in addition to any other medicine that may be resorted to during the day. This pill may be advantageously persevered in for several weeks, but after the first week, I recommend its exhibition only every second night.

I have remarked on the use of the *lobelia inflata* at page 81. The American physicians have great confidence in the power of this article in spasmodic asthma. Dr. Eberle, of Philadelphia, says, (*Treatise on the Practice of Physic,* Vol. 2, p. 219, 1831).

> "Of all the remedies we possess, the *lobelia inflata* is, I think, decidedly the most valuable in this affection. Within the last five years, I have had an opportunity of witnessing its good effects in four cases; and I can truly say, that in two of them it acted like a charm. I have known the most violent paroxysm of spasmodic asthma completely subdued in less than thirty minutes by this medicine. It appears to me that ergot does not more certainly act upon the gravid uterus during parturition, than the lobelia upon the pulmonary organs in asthma. I have even found it to mitigate the difficulty of breathing, which occurs in consequence of organic affections of the heart. Since the publication of the first edition of this work, I have had occasion to prescribe this article in a violent, and inveterate case of this malady. The good effects, in this instance, were as prompt and decisive as in any case I had previously witnessed. In one hour after the exhibition of the remedy, the patient's respiration was entirely free from difficulty or oppression."
>
> "The good effects of a full dose of this medicine are often experienced in the course of ten or fifteen minutes after it is taken."

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We should commence with a dose not exceeding a tea-spoonful in water.

Occasional blisters are very advisable but a perpetual issue or seton in the side arm or between the shoulders, is of still greater effect, and sometimes proves a powerful remedy. It ought never to be neglected in bad cases, for if it fails to cure, it rarely falls short in relieving.

The inhalation of oxygen gas has been known to prove curative in asthma. It is chiefly in those instances where the face is pale, and the strength reduced, that it is a valuable remedy, since its principal effects are those of a powerful tonic. Dr. Beddoes of Bristol, who has related cases of asthma treated with complete success by this means, observes, "no sooner does the oxygen gas touch the lungs, than the livid colour of the countenance disappears, the laborious respiration ceases, and the functions of all the organs of the chest go on easily and pleasantly again". Dr. Ferriar of Manchester, has spoken in equally high terms of the inhalation of hydrogen gas. It seems to be more particularly applicable to those cases in which the complexion still continues florid, and the general strength is but little impaired, especially in the dry or spasmodic asthma.

Dr. Wilson Philip discovered that, in habitual asthma, the application of galvanism is often of great benefit, and some times effects a complete cure. From eight to sixteen four-inch plates of zinc and copper are sufficient in power, with a fluid composed of a hundred and twenty parts water and one part muriatic acid. The galvanism is applied in the following manner :— Two thin plates of metal, about two or three inches in diameter, dipped in water are applied, one to the nape of the neck, the other to the lower part of the region of the stomach. The wires from the different ends of the trough are brought into contact with these plates, and as great a galvanic power maintained as the patient could bear without complaint. In this way the galvanic influence was sent through the lungs as much as possible in the direction of their nerves. It is proper constantly to move the wires upon the metal plates, particularly the negative wire, otherwise the skin is injured in the

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places on which they rest. The relief seems much the same, whether the positive wire is applied to the nape of the neck or the pit of the stomach.

The galvanism is to be discontinued as soon as the patient says that the breathing is easy, which varies from five to fifteen minutes. It is remarkable, that in several who had laboured under oppressed breathing from ten to twenty years, it gave relief quite as readily as in mono recent cases.

In all inflammatory cases of asthma, the application of galvanism would be injurious; and in cases arising from dropsy, or any other mechanical impediment, little or nothing, it is evident, is to be expected from it.

Probably the chief immediate cause of habitual asthma is a deficiency of nervous power in the lungs, and experiment droves that galvanism has a greater and more immediate effect in restoring the nervous influence to these organs than any other remedy. It is from this property, therefore, that it is so frequently found of such essential service in this complaint, when no ordinary means are able to reach the case. Mr. Cole, the house-surgeon of Worcester Infirmary, states that no other means there employed have been equally efficacious in relieving this disease; indeed it is asserted, that this remedy has succeeded there in curing and relieving asthma, in the ratio of ninety cases out of a hundred. Mr. La Beaume likewise says, in referring to his own practice; Many instances of habitual as well as spasmodic asthma, recurring in winter or summer, after certain intervals have been perfectly and permanently cured, in patients of different ages, by gal-vanism". In my opinion, this remedy has not gained that confidence and attention in the treatment of asthma, which it merits both from the patient and practitioner.

Among other instances of remarkable recovery in the present malady, from the skilful use of galvanic influence, Mr. La Beaume relates the following very satisfactory case.

"About seven years ago, a gentleman far advanced in life came to me for relief; his breathing was hurried, and very laborious, and he had been for more than twenty years constantly suffering from

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habitual asthma, and a great difficulty in expectorating the tough viscid phlegm, which almost impeded respiration. In a very few minutes after he was subjected to the galvanic current, his breathing became perfectly easy, and he was able to expectorate freely, and to walk up stairs without any difficulty. After a month he obtained perfect and permanent recovery."

Equal success has attended the administration of this means in France.

The warm bath is generally hurtful, but the cold bath often proves extremely useful. It must be used only during the absence of the fit, and seems particularly beneficial to persons of great constitutional vigour. In 1793, a Dr. Ryan published a valuable work on asthma, in which he adduces many instances of successful treatment by the cold bath. I have known the free use of cold water very beneficial.

The smoking of tobacco or stramonium, is frequently of the greatest service, although some physicians object to the practice. *See* p. 126. Like other remidies, it sometimes fails altogether; but in some dases, says Dr. Watson, "it calms the paroxysm like a charm".—*Lectures,* Vol. 2, p. 362. It would seem to be especially applicable to humoral asthma, in which form the patient expectorates rather copiously, and where there is no great fulness of habit.[1] A remedy of great efficacy are the fumes from blotting paper steeped in a strong solution of saltpetre, and afterwards dried. A little of this paper should be burnt before the patient, and the fumes inhaled. I have known it afford considerable relief.

For the flatulency accompanying this disease, the following may be found an appropriate and efficacious medicine. It will also relieve the cough and oppression of the chest.

Take of Distilled vinerar ..... 2 ounces;
Powder of ipecacuanha ..... 4 grains;

1. "*Stramonium* is one of the best remedies that can be prescribed in the spasmodic form of asthma. It is principally used by smoking it as tobacco."—Dr. Copland's *Dictionary of Medicine,* p. 148.

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Water ..... 3 ounces;
Mix, and take one or two table-spoonfuls every four hours, or as occasion requires.

A distressing pain sometimes affects the integuments of the head, and generally at the back of the head. I have known a blister afford perfect relief in this pain, but in general the most effectual remedies are stomachic and volatile medicines, with diaphoretics, as the draught, No. 32 or the mixture No. 77 or 78, which may be accompanied, if necessary, with a pill containing three grains of the compound ipecacuanha powder, twice or thrice a day.

The diet must uniformly be light, and easy of digestion, consisting chiefly of fresh animal food, eggs, bread, tea, cocoa, etc. That recommended under the head of INDIGESTION is the best that can be resorted to. A waistcoat of wash leather, or flannel, worn constantly next the skin, from September to May, inclusive, is highly to be recommended.

With respect to regimen, the points most worthy of atten. tion are, to keep the bowels regular, by diet and friction; to preserve the surface of the body warm, avoiding damp, wet and the east and north-east winds; and to take daily exercise in the open air, when the weather permits, short of fatigue. Horse and carriage exercise are by far the best. Removal to a mild climate is highly advisable; and what is said on this point under the head of CONSUMPTION is applicable here. The Isle of Wight, Clifton, and the southern parts of Devonshire, are the most eligible situations for asthmatic persons, most of whom live there with far greater comfort and security, than in any other part of Great Britain. Epsom, Dorking, or Reigate, in Surrey, are eligible situations for those who will not, or cannot go far from London.

BARRENNESS

The *causes* of barrenness are various, but the most usual kinds are :

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1. Barrenness from impotency or imperfection or abolition of the conceptive power;
2. Barrenness from the monthly discharge being either morbidly retained, or secreted with difficulty or in profusion;
3. Barrenness from personal aversion or want of appetency. And the first kind may be either atonic or organic, that is, proceeding from direct imbecility or want of tone or produced by some structural hindrance or defect, whether natural or accidental.

In the first kind, proceeding from imbecility or want of tone, the proper remedies are, local and general tonics and stimulants, especially cold bathing, preparations of iron with bitters, as No. 102 or 103, page 196, electricity, blisters, issues or setons and ginseng, combined with change of air and scene. Abstinence for a time is likewise very advisable.

If this condition is produced by some hindrance or defect in the structure of the parts concerned, that hindrance must, if possible, be removed, and then the most efficacious course consists of alteratives, as the pill No. 98, page 181, at night, with ten or twelve ounces of the compound decoction of sarsaparilla, in divided doses during the day, (or the powder of sarsaparilla), and an occasional tepid bath, at about 95 degrees, the bowels, being kept regular with a mild aperient pill.

When the barrenness arises from painful menstruation, the cure must depend upon a removal of the particular kind of morbid affection that operates at the time, and lays a foundation for the disease, the proper means for effecting which will be found under the head of *Menstruation, Retention of the Menses,* and *Suppression of the Menses.*

Female sterility from personal aversion is a complaint irremediable by the healing art, and can only be attacked by a kind, assiduous, and very affectionate attention, which will rarely fail of its object.

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In my TREATISE ON THE DISEASES OF FEMALES, I have entered at some length into the several causes and the management of female sterility, and refer the reader to that book; but I take this opportunity of stating, that a Dr. Taylor, who many years since practised at Croydon, when consulted on the point, looking to the probable advantage of a spare diet, used to place both the husband and wife on a diet of milk and vegetables, and by this means he succeeded in several instances, in realizing the hopes of a family.[1] This is an excellent practice where it is not contra-indicated by any peculiar condition of the parties, and especially when conjoined with an active life, in a good country air. The effects of a spare and rather low diet upon the procreative powers are certainly remarkable, and within the sphere of every man's observation; for the married poor almost every where abound with children, while the rich are often childless, and large families among them are comparatively rare. Twins are extremely common in the Highlands of Scotland, and still more so in Ireland, where the diet of the majority of the inhabitants is scanty, and of no very nutritious qualities. In the Lying-in Hospital in London, twins occur once in every 85 births, and three children at a birth, once in every 14,393 ; while in Dublin, the proportions are 1 to 49 for the former, and 1 to 1,462 for the latter.

BILIOUS COMPLAINTS

The disorders of the liver have attracted so great and unrea sonable a degree of attention of late, both from the profession and the public at large, that it is exceedingly common for almost all complaints subsisting within the abdomen (or belly), to be resolved into some

1. "I remember Dr. Taylor, the milk doctor of Croydon, pointing out to me two or three opulent families in his neighbourhood, who, after marriage, had continued several years without posterity, and were extremely solicitous about it; and whom, in two or three years' time, he had brought to have several fine children, by keeping both parents all that time to a total *milk and seed diet.* This he solemnly averred to me, and we know, that even old *Homer* had observed, that the feeders on milk were the *most honest* of Men."— *Cheyne Natural Method of Curing the Diseases of the Body,* 1742, p. 281.

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irregularity or deficiency in the secretions of that organ; and as by far the greater number of disorders found among civilized men, whether local or general, originate or centre in the aberrations of the important organs of digestion, and are most readily cured by the employment of remedies which have the power of bringing them again into a healthy state, and improving the quality of the blood, the prevailing opinion of the paramount influence of the bile over the well-being of our whole frame, has appeared so well founded, as to have gained almost universal belief, and the terms *bilious* and *liver* complaints have, cons-equently, become *fashionable,* and are freely employed persons of every rank and condition. But this prevailing opinion has not so good a foundation as it seems to have. The liver is, indeed, a large organ, and it is unquestionably of much consequence that the bile it secretes should be healthy and in proper quantity. But many physicians consider that the state of the biliary system depends on the general state of the health; and that the absence of redundancy of bile is not the cause, but the consequence of disorder or disease.

Unquestionably, if sufficient exercise is not taken, and the diet and general mode of living are bad, all the natural discharges of the body will suffer, the blood will become impure, and the liver will cease to excrete bile in sufficient quantity, and of good quality. Hence arise *sick-headache, indigestion, languor, debility, diarrhoea,* and other accompaniments and indications of biliousness.

By far the greater number of bilious affections, are examples of *Indigestion* and *Impoverished Blood.* They are owing to an unhealthy condition of the digestive tube, and of the blood, and thus the author hopes his readers will constantly view them, knowing that as such they are invariably most safely and successfully treated.

For the symptoms and treatment of bilious complaints, the reader is, therefore, referred to INDIGESTION. Whether these prevailing maladies are considered bilious or stomach complaints, *it is certain* the administration of much mercury is never necessary, and always hurtful. A little calomel, or blue pill, for example, a

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quarter of a grain of the former, or two, gains of the latter, given every other night, is frequently of great service, but beyond this, they are seldom safe; and now that calomel is so frequently and largely administered to the great injury of those who thus take it, this is a point worthy of serious attention.[1] A nourishing diet should be observed.

Some persons, troubled with bilious affections, are in the habit of taking strong calomel pills for the removal of their disorders; others have frequent recourse to emetics or purges; both these measures are wrong in principle, and bad in practice. They are wrong in principle, because these complaints necessarily imply the existence of weakness and disorder of the stomach and bowels, in other words, of deficient and irregular action, and such means are not calculated to remove the former, nor correct the latter; and they are bad in practice, since both calomel and emetics, when frequently repeated and long continued, cannot fail to aggravate and confirm the evil they were intended to cure. They often afford present relief, I allow, but that very relief is but a prelude to another attack, from the inefficacy of the means employed, and the increase of weakness they have occasioned.

One of the most useful plans of treatment in bilious disorders, which I am acquainted with, consists in carefully regulating the bowels by diet and regimen, or by the pill No. 104, the region of the stomach and bowels being well rubbed twice a day with the flesh-brush, the patient taking the decoction of dandelion, and washing the body well over with cold water once or twice daily. Active exercise also in the open air is essentially necessary. A rigid twelve months course of such *training,* with the use of the pills No. 104, or 104 A, or of the mixture No. 84 A or 84 B, page 184, and the free use of cold water, will perfectly cure six cases out of seven of the most severe bilious disorder; and I have no doubt that an extensive experience of the extraordinary effects of this plan, will uniformly sanction the correctness of the opinion.[2] An entire

1. See my volume on INFANCY AND CHILDHOOD, in which this subject is investigated more at length.
2. For an ample account of the system of *training,* see the "BEST METHODS OF IMPROVING HEALTH", or the Art of Living comfortably, by regulating the Diet and Regimen.

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disuse of sugar in tea will often afford material aid towards the cure.

Another very good plan is to take a dose of Dr. Budd's remedy, No. 74 D, page 178, every morning, a pill No. 104, page 197, every day at one o'clock, and to have recourse to free exercise, a spare diet and early hours.

DISEASE OF THE BLADDER

There are two complaints affecting the bladder, which ought not to pass unnoticed in the present volume, as they are sometimes extremely distressing and alarming : they are, an irritable painful state of the organ, and a thick whitish discharge from it.

The Irritable Bladder

Is generally a very painful malady, in which the patient is distressed by a frequent desire to void his urine, accompanied with great pain in the region of the bladder; and in the continuance of the disease, the former symptom becomes at length so urgent, that he cannot pass more than ten or fifteen minutes without feeling the inclination to recur. In this case, the bladder is the subject of chronic or slow inflammation, when the stimulus of the urine is such as to excite excessive pain, and an incontrollable desire to part with it nearly as soon as secreted. This is proved by the degree of pain felt being invariably in proportion to the quantity of urine contained in the bladder, and also by the nature of the means which are found most effectual in curing the disease, which are detailed below. Sometimes in this complaint the urine is mixed with blood; and should it go on to produce ulceration in the organ, there will be a discharge both of blood and mucus, and frequently of matter (pus).

Perhaps the most common cause of the present disease, is retaining the urine for a considerable time after feeling an inclination to part with it. This cause alone has been known, in many instances, to induce the complaint in a most severe degree, and has occasionally even proved fatal. This affection is likewise

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not unfrequently a consequence of gonorrhoea; and sometimes it accompanies stricture.

It may be *distinguished* from stone in the bladder, by observing, that, in the latter complaint, severe pain is felt after the water is voided, while in irritable bladder its expulsion is always followed by considerable and sometimes perfect relief.

TREATMENT. The objects to be accomplished in this case, are to keep the organ in a state of rest and ease, by constantly wearing a catheter; and to allay pain and irritation by the internal use of alkalise, combined with opium, occasional doses of calomel and opium, cupping on the loins, the warm bath and warm fomentations, etc.

When, therefore, a patient is suffering from irritable bladder, he should immediately have ten or twelve ounces of blood taken from the loins by cupping; a blister should then be placed on the lowest part of the belly over the region of the affected organ, after the part has been shaved, and a grain of opium mixed with a grain of calomel, and made into a pill, be taken directly, and repeated every night, or twice a day if the symptoms are severe. The anodyne enema, No. 9, page 147, may also be injected with considerable advantage, and warm fomentations, with the tepid bath, at 97 or 98 degrees, are proper. Through the whole course of the complaint, the bowels must be preserved free from confinement by the use of castor oil.

To keep the bladder in a state of rest, a short flexible cathe- ter should be introduced without delay, and constantly afforn by the patient until he has perfectly recovered. This instrument affords great ease, by allowing the urine to escape as fast as it is secreted by the kidneys, thus keeping the bladder continually empty. The point of the catheter should only just enter the bladder, to accomplish which it is necessary to pass it to the extent of about nine inches, when, after the remainder has been cut off, its points should be tied to a bandage carried between the thighs and round the loins. As much quietude as possible must be observed.

The foregoing means will afford immediate and sensible relief, and alleviate the acute symptoms, when the patient will act wisely

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to take twenty drops of the liquor potassoe, or half a tea-spoonful of the *alkaline solution,* (page 2), with four drops of laudanum, three or four times a day, in barley-water; and this medicine, if it agrees, should be continued for a month or more, till the cure is established. As the patient recovers, the quantity of opium, may be gradually lessened to one or two drops in a dose.

Now and then the irritability of the urinary passage, as yell as that of the neck of the bladder, is so great, as to render it impossible to pass the catheter, without occasioning considerable pain, and subsequent increase of the irritation for some days. This is a rare occurrence, but when it does happen, the catheter must be laid aside altogether, and the other means just noticed trusted to alone.

When the case is of an aggravated nature, and the bladder has become ulcerated, the same treatment ought to be adopted, as it is the most effectual one with which we are acquainted. Here the remedies will require a longer perseverance, and instead of the pill of calomel and opium simply, as prescribed above, I should prefer the pill No. 99, page 192, or that marked No. 98, given regularly every night, or twice a day, with the alkali and opium, as just recommended. The powder of bear's whortle-berry is a medicine of great power in ulcerated bladder. See page 17. The power of whortle-berry, combined in equal proportions with the powder of sarsaparilla, will be found very efficacious in most diseases of the bladder. Half a drachm, or a drachm of each may be given, twice or thrice a day, in dill or common water.

The *buchu* leaves, and *pareira brava*, are also of great service in irritable bladder. In some cases they will be found of greater efficacy than either of the medicines previously noticed. The mode of using them is explained at pages 23, 100. If the whortle-berry or sarsaparila powder are not sufficient alone, take them in an infusion of the buchu leaves or a decoction of the pareira brava.

In some severe cases of irritable bladder, the patient is compelled, by the painful symptoms present, to have recourse daily to large doses of opium or some other anodyne. As it is of consequence to avoid the frequent use of large quantities of opium, I would recommend, in such cases, a trial of the compound

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ipecacuanha powder, combined with extract of hemlock, or henbane, which will be found very valuable. The farm No. 110, page 199, is proper. One or two pills may be taken once, twice, or thrice a day, according to the exigencies of the case. In some instances, the proper use of this combination will have more than a palliative effect.

Of course, attacks of pain in the bladder are met with in medical practice which continue for a longer or a shorter time after making water, or come on without making water. I have lately seen a case in a lady in which the pain continued most severely for four hours. This kind of case, when not inflammatory, is generally the result of great derangement of the digestive functions, and will be most effectually combated by restoring the digestive organs to a state of healthy action.

Mucous Discharge from the Bladder

Now and then we meet with a patient who discharges by the urethra a large quantity of thick ropy mucus of a yellow colour, unmixed with blood, which medical men call the mucous disease of the bladder. In general, this discharge is produced from the internal surface of the kidneys, ureters and bladder.

Its *causes* are various. When there is a disposition in the parts affected to so free a secretion, whatever deranges the general health or directly impairs the energies of the urinary organs, may be productive of this complaint.

TREATMENT.—The best remedies here are the pareira brava (page 100), buchu leaves (page 23-24), balsam of capivi, the bi-chloride of mercury and alkalies. If the patient tries the capivi balsam, he should take *Jozeau's saccharated capsules* of copaiba, as advised at page 12-13. If the disorder resist the use of this medicine, and also of the pareira brava or buchu leaves, which is not often the case, half a tea-spoonful or more, of the solution of bi-chloride of mercury, and half a drachm of sweet spirit of nitre, may be taken in water thrice a day. Whatever medicine be resorted to, Thwaites's soda-water, sparingly used or lime water, will be a

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useful beverage; and the bowels ought to be preserved free from any accumulation by the mildest measures, as the use of small doses of castor oil or the pill No. 100 or 101D, page 195.

BLEEDING FROM THE NOSE

A considerable discharge of blood from the nose is usually preceded by chilliness, coldness of the limbs, weakness, pains of the back and head, costiveness, frequent, full and sometimes hard pulse, with boat, fulness and tension about the nose, strong beating of the arteries of the head and neck, and flushing of the face; but occasionally bleeding from the nose, like all other bleedings from constitutional causes, makes its appearance without any preceding symptom, especially when it is inconsiderable.

Whatever are the symptoms preceding this flow of blood, the chief cause generally lies in an unhealthy condition of the constitution, or in a confined state of the bowels. The former seems to obtain most frequently in adults, and the latter in children.

It is very seldom dangerous.

TREATMENT.—In the treatment of this discharge of blood, it is necessary we should first consider, whether it be owing to a plethoric or a debilitated state of the body and whether it appears to afford relief from any previous unhealthy symptoms, or is attended with manifest injury. For, in full habits, where there is considerable corporeal vigour, it is generally attended with advantage, and our principal regard should be paid to prevent its continuing too long, or being too profuse; while in weakly persons it is certainly hurtful, and for the most part requires to be checked without delay.

If then a considerable haemorrhage from the nose occurs in a young or middle aged person, in whom no weakness is apparent, but rather a sufficient circulation of blood, the best and most proper remedies will consist in local astringents and emetics. The face may be frequently immersed in the coldest water, and the temples, or even the whole head, be surrounded with a band or napkin moistened with it, and frequently changed. Cold applied to the

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back by means of cold cloths, or any cold metal, as a bit of tin, will frequently succeed, but it is still more certain if applied to the genitals; or cold water and vinegar may be thrown up the nostrils with a syringe. These means will seldom fail to check the flow of blood, but when they do, an emetic of twenty grains of ipecacuanha powder may be administered in water, which is often a powerful remedy. It may now and then be requisite to give the patient ten drops of the tincture of digitalis three times a day, when the foregoing means are not perfectly successful. The diet in this case should be small in quantity and consist of the simplest articles.

In any large bleeding from the nose, some let blood from the arm, and it may now and then be advisable; but it is by no means so desirable a practice as some medical men think, for if the bleeding takes place in a strong person, particularly if full of blood, it is often a salutary effort of the constitution to relieve itself, which relief ought to be, and will be, much better attained by allowing the blood to flow from the nostrils, than by substituting an artificial abstraction by means of the lancet, our care being to prevent the discharge from being excessive, by the use of astringent applications. Should the hamorrhage, on the contrary, occur in a weakly person, or in those of average health, it has its foundation in debility, when, of course, the employment of the lancet would be highly reprehensible.

When bleeding from the nose occurs in debilitated habits, the arterial action is weak, the blood frequently thin and of a diluted red, and it generally flows without heat or head-ache. Here bleeding must never be had recourse to, but take directly the powder No. 130A, page 209, and repeat it every morning. The general rule is to proceed at once with a tonic plan of treatment, giving ten or fifteen grains of powdered bark or two grains of quinine or a pill composed of five grains of carbonate of iron, and a third of a grain of powdered aloes, with a little extract of gentian, three times a day, applying the cold astringents locally, as above noticed. Twenty drops of tincture of muriat of iron, thrice a day, in a wine-glassful of water, is a valuable remedy. Should the bleeding be obstinate, the following pill may be resorted to, as one of the most efficacious medicines that can be given :

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Take of superacetate of lead ..... 5 grains;
Powdered opium ..... 2 grains.
Mix, and make, with a little conserve of roses, into five pills. One to be taken three times a day.

The diet should be mild but nourishing; and if the loss of blood has been great, and has occasioned considerable exhaustion, a little port wine may be given immediately or a little quinine.

In all cases, the bowels should be opened by some saline aperient, such as No. 130 A, page 209. Children of a costive habit, who are subject to frequent bleeding at the nose, will find a great advantage from having the mild opening powder, No. 130A, administered every other morning or three times a week, for six or eight weeks, continuing it afterwards occasionally, so as to prevent constipation.

BLOOD DISCHARGED FROM THE BLADDER

The chief causes of this discharge of blood are a stone in the bladder; a violent blow on the kidneys or bladder; or general weakness and indisposition.

The treatment is the same as has just been described in case of bleeding of the nose. It is, however, most frequently dependent upon debility, and the most efficacious remedies are the superacetate of lead, gallic acid, and the tincture of muriate of iron. Twenty or thirty drops of the tincture of muriate of iron may be taken in water every hour or every second hour, till the bleeding stops.

Whatever are the medicines resorted to, the compound powder of ipecacuanha may be given with great advantage at the same time, to allay pain and irritation. Three or four grains made into a pill with extract of hemlock, three times a day, is the proper dose. The use of mucilaginous drinks will likewise be very proper, as a strong solution of gum arabic in water, linseed tea or decoction of marshmallows.

Dr. Golding Bird recommends in the strongest manner galllic acid, (N.B. *not* tannic acid) as a remedy of extraordinary value in

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the treatment of *hoematuria* or bleeding from the bladder. It should be given in doses of five or six grains in a draught, with an ounce and a half of mucilage of gum arabic, and ten drops of tincture of henbane, which draught is to be repeated at short intervals. He says, he has seen "this drug arrest for many weeks bleeding from an enlarged (and fungoid?) kidney, after all other remedies had failed." *Bird on Urinary Deposits*, 3rd edition, p. 329.

If the blood is discharged mixed with mucus or pus, and is of a slow protracted character, the pareira brava or the buchu leaves may be tried; or twenty grains of fresh whortle-berry powder, taken three times a day, is often of much benefit, and the pill No. 99, page 192, may be taken every night, at the same time. *See* IRRITABLE BLADDER, page 383.

BLOOD DISCHARGED FROM THE BOWELS

Now and then blood is suddenly discharged from the bowels, without the presence of dysentery; in which case the superacetate of lead, as in the preceding page, or the tincture of muriate of iron, internally, with cold applications externally, form the most effectual means of checking it. The cinnamon mixture, No. 82A, is also useful–See BLEEDING FROM THE NOSE. In this disorder, and also in the two preceding affections, attention should be given to improve the state of the blood and constitution, as directed under CHRONIC DISEASE and INDIGESTION.

BOILS

A boil is a small tumour or abscess common to every part of the surface of the body, hard, circumscribed, acutely tender to the touch, and suppurating with a core in the centre. It is chiefly found in persons of a full habit and great vigour, but is sometimes met with also in debilitated patients, who are evidently suffering from ill health.

As a general rule, no application is so useful as adhesive plaster, a piece large enough completely to cover each boil being applied,

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and renewed about every second day. This preserves the tender part from friction, supports the vessels, and relieves pain, while it does not at all interfere with the discharge of matter, should the boil suppurate. At the same time take an alterative pill, No. 98A, page 193, every night and a quinine pill twice a day.

When it occurs in the strong and vigorous, some cooling opening medicine should be given, as No. 73 or 71, or 74A, page 176, or the saline powder, No. 130A, page 209. A common poultice may sometimes be applied with advantage till the boil suppurates and breaks, when it may be dressed twice a day with the calamine cerate, or Goulard ointment, till it heals; but no plan is generally so good as covering the boil with adhesive plaster. The aperient must be repeated every other day. If the ulcer gets into a chronic state, and wants stimulating in order to its healing, apply an ointment composed of two parts of spermaceti ointment, and one part of the ointment of nitrate of mercury. The composition of these ointments is to be seen at page 188-89.

Boils not unfrequently arise in weakly habits, or where the constitution is evidently in an unhealthy state; in such cases the alterative pill, No. 98A, page 192, given every night, or every other night, with an aperient pill occasionally, and a tonic in the day will be found of great service. The first thing to be done is to take an aperient pill, No. 97, page 191. The powder or compound decoction of sarsaparilla is likewise an excellent medicine, and may be taken at the same time; and sometimes quinine will be serviceable. A table-spoonful or two of yeast, thrice a day, has been found of great efficacy; even where boils have been epidemic. In strong constitutions, mild and systematic purging, as with No. 130A, page 209, is often of the greatest service.

Boils on the Gums

Gum-boils are sometimes limited to the substance of the gums, and sometimes connected with the decay of a tooth or socket. In the first variety, it is a disease only of a few days duration, and ceases almost as soon as it has burst or is opened; in the second, it

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will often continue troublesome till the carious tooth is extracted, or the carious socket has exfoliated, or the whole of its texture is absorbed.

Gum-boils, when connected with an unhealthy condition of the subjacent teeth, rarely disperse without passing into suppuration, and it is, therefore, generally better to encourage this process by the use of warm fomentations, or cataplasms, than to repel it. If much pain is present, the application of a leech or two to the parts may be of great service. An early opening of the tumour is of importance, as, from the structure of the parts concerned, the walls of the abscess are mostly tough and thick, and the confined matter seldom obtains a natural exit with sufficient freedom. A little mild opening medicine, as No. 73 or 74, page 176, every other day, will be found useful; and after the abscess has burst or been opened, washing the mouth twice or thrice a day, with an astringent lotion will tend materially to make the cure permanent. Twenty grains of sulphate of zinc, dissolved in half a pint of rose-water, will be a suitable lotion for this purpose. Quinine is often a useful medicine in this complaint.

BREAST-PANG

This is an acute constrictive pain about the breast-bone, extending towards the arms, attended with anxiety, difficulty of breathing and a sense of suffocation. It is called by medical men *angina pectoris.*

Those afflicted with this disease are seized while they are walking, (more especially if it be up hill, and soon after eating), with a painful and most disagreeable sensation in the breast, which seems as if it would extinguish life, if it were to increase or continue; but the moment they stand still all this uneasiness vanishes. The pain is sometimes situated in the upper part, sometimes in the middle, and sometimes at the bottom of the breast-bone, and often more inclined to the left than to the right side. In the beginning, it often extends only to the top of the shoulder or middle of the arm, but soon finds its way to the elbow, wrist and fingers' ends. The pulse is, at least sometimes, not disturbed by the pain.

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After it has continued a year or two, or more, it will not cease so instantaneously upon standing still, and it will come on not only when the persons are walking, but when they are lying down, especially if they lie on the left side, and oblige them, to rise up out of their beds. In some inveterate cases it is brought on by the motion of a horse or a carriage, and even by swallowing, coughing, going to stool, or speaking, or any disturbance of mind. When the complaint has been of long standing, the pain will sometimes last a considerable time; indeed so long, that I have known it professionally treated, by very active measures, as the pain of inflammation.

The cause very often lies in some kind of positive disease in the structure of the heart, or its larger blood-vessels; but sometimes it is only a spasmodic affection, arising from imperfect digestion, etc. According to my experience, spasmodic breast-pang, occurring in persons below forty, is much more frequent now than formerly, and the reader will find, under *Neuralgia,* some further remarks on this point.

Men are most subject to this malady, especially such as have passed their fortieth year, and those who have short necks, and are of a corpulent habit. Frequent attacks of acute rheumatism or gout seem strongly to dispose to diseases of the heart, and to give rise to this complaint; and it is invariably much aggravated, whatever may have been its original cause, by anxiety, excessive exertion of mind or body, and food of difficult digestion. An indolent or sedentary studious life may cause it, especially if distress of mind be superadded.

Some authors have scarcely witnessed it under fifty years of age, but I have seen an unusually well marked case in a gentleman about thirty. He was a very rheumatic subject, (this was the person referred to under acute rheumatism), and died suddenly of an attack of *angina* at the age of thirty-six.

Perhaps the most common opinion among physicians is, that the disease is a species of *neuralgia* of the nerves of the lungs and heart, affecting the functions of the heart and respiratory organs, and extending, by nervous connection, to other parts; the organic

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lesions found in fatal cases being either causes, coincidences, or effects of the disease. To this opinion I subscribe.

The acute constrictive pain across the chest running down the left arm, supervening suddenly upon motion, and as quickly relieved by rest, taken in conjunction with the age of the patient, is sufficiently distinctive of this affection.

TREATMENT— During the paroxysm, effectual relief is generally obtained by quiet, rest, opium and cordials. When attacked, the patient should invariably and immediately sit or lie down, and take fifteen drops of laudanum, or ten of Battley's solution, in a glass of lukewarm water. Battley's solution of opium is a valuable palliative in this complaint, and preferable to laudanum. Or a little warm brandy and water, or half a tea-spoonful of ether, in water, may be taken.

Some physicians have recommended a small bleeding, especially if the patient be of a full habit; others prescribe an emetic to carry off the paroxysm. But they appear to me to be at best but very doubtful remedies, except there is a well-marked fulness of habit, and I fully concur in the opinion of Dr. Heberden, who was the first physician who published a full and perspicuous account of the disease, that in general bleeding, vomiting and purging are improper.

The most powerful remedies, in the intervals of the fits, are the metallic tonics, as oxide of bismuth, sulphate of zinc and preparations of iron; sulphate of quinine; ammoniated tincture of guaiacum; blisters or issues; and such a plan of diet and regimen as is calculated to allay irritation in the digestive organs, and to invigorate the general system. When the disease depends upon a faulty state of the organs of digestion, these means will often perfectly succeed in curing the patient; and when it is owing to organic injury of the heart, they will frequently be very useful, and rarely fail of affording relief. In most cases, I should give at the same time a Plummer's pill every second night.

The bismuth pills, No. 103A, page 197, or the sulphate of zinc pills, No. 106A, may be tried with the prospect of advantage. I have found the ammoniated tincture of guaiacum very useful, and

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it appears to me to be particularly indicated where the disease has followed rheumatic fever. An issue on the breast, or between the shoulders, or a perpetual blister, should be resorted to at the same time. The mezereon issue is a good one; see page 84. In all cases, a local drain of this description is likely to be of much service, and when the disease has followed the sudden suppression of any habitual discharge, it is highly necessary. The eruption effected by the use of the tartar emetic ointment, will often be of more immediate and lasting benefit than what follows either an issue or blister. Whatever other medicine is taken, should the bowels be constipated, they must be kept regular by an occasional use of the pills, No. 100, 101A, or 101B, page 193-94 ; or the powder No. 130A, page 209; and when there is any considerable irritability present, or want of sleep, twenty drops of Battley's solution of opium, or six grains of the extract of henbane, may be administered at bed-time.

The diet should be light and sparing; all spirituous and heating liquors must be given up; the exercise indulged in be of the gentlest kind; and all anxiety and violent emotions of the mind be carefully avoided. The diet and regimen advised under INDIGESTION, and at page 363-64, are the best that can be advised.

The nitrate of silver, and other metallic remedies, besides those above referred to, have been recommended for the cure of this affection; but men now are ever hunting after new remedies, and too seldom satisfied with either the new or old, and we ought to be on our guard against this desire for novelty. The means previously described will always succeed if any will, and our chief business should be to apply them in the most skilful manner, so as to meet the changes and exigencies of every case. Even arsenic has been praised for its effects in *angina pectoris*; but it appears to me to be a particularly ineligible medicine, since it has undoubtedly a strong tendency to produce disease of the heart. I may, however, mentions that prussic acid will sometimes be found very useful to allay the pain and irritability of the heart ; and the *lobelia inflata* also is useful, as a palliative, in certain cases. *See* page 374.

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BRIGHT'S DISEASE AND DROPSY ARISING FROM IT

This remarkable disease appears under two forms, *viz.* the *acute* and *chronic.* In the acute form the kidneys are found to be very large and swollen, from an increased quantity of blood. Symptoms of inflammation in them exist; and Dr. Watson thinks, and with good reason, that the change in the structure of the kidneys, "in all its varieties of aspect, may be ultimately traceable to an undue accumulation and stagnation of blood in the blood-vessels of the kidney." *Practice of Physic,* vol. 2, p. 584. The urine is of a smutty appearance, as if soot had been stirred into it, and it is highly albuminous, that is, it contains a considerable quantity of the albuminous matter of the blood. In an advanced stage of this *acute* form, the disease having run on unchecked, the kidney becomes large and white, and the urine of high specific gravity; and then the red particles of the blood being greatly impoverished, the patient's skin acquires a peculiar pallid, doughy, and even waxy aspect, and he becomes dropsical. In the *chronic* form, there is a wasting of the entire kidney, and it is essentially a degeneration of that organ. The urine is of low specific gravity, but it is only slightly albuminous, if at all so, and generally the symptoms of dropsy are few and inconsiderable.

The urine is highly characteristic, but we cannot enter into this subject in a work designed principally for domestic use. For the guidance of junior medical practitioners we may, however, state that a desquamation of renal cells, to be recognized under the microscope, is usually considered a certain sign of the' acute form of Bright's disease.

The pale and watery condition of the blood in the *acute* forms of this disease, at length produces unpleasant and alarming symptoms in the head, such as stupor and coma, owing probably, at least in part, to, the functions of the brain being exercised very irregularly and languidly, and at length not at all. Vomiting and diarrhoea frequently accompany the other symptoms. Disease of the heart is a frequent accompaniment of *Bright's disease* of the kidney; and sooner or later severe bronchitis is apt to be developed.

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The *causes* of this malady often lie in obscurity. Scarlet fever is, however, a certain cause in many instances, and so is intemperance. Exposure to cold and damp, and the checked perspiration consequent thereon, appears to have been a frequent cause.

TREATMENT–A remarkable deterioration in the blood exists here, and many uncomfortable feelings are complained of, and yet the only symptom that usually leads us to suspect disease of the kidney is dropsy. General dropsy is commonly a consequence of this disease, the fluid effused not being confined to the lower extremities, or the abdomen, but affecting the upper limbs also, and the face, showing itself particularly beneath the eye. The genitals are always affected by it. The dropsy is most decided where the urine is most albuminous, and the blood most abundant in water; there being then the greatest drain from the blood.

To ascertain whether the urine contains albumen, boil a little in a small glass tube. If it is albuminous, curdy fragments or flakes will appear. Then drop four drops of nitric acid into two tea-spoonfuls of this urine, and if albumen is present, the flaky appearance will remain.

In any stage of dropsy from Bright's disease of the kidney, stimulating diuretics, such as squalls, nitre, turpentine, cantharides, should not be employed; but the most efficacious remedies are Mindererus's spirit (solution of acetate of ammonia) combined with tartarized antimony and water, as No. 87A, to be given during the day, and two scruples of compound jalap powder every night, or every other night. These medicines lower the action of the heart, relieve congestion in the kidneys, and extreme circulation, and promote healthy secretions from the skin. By these means the albumen will cease almost entirely from being found in the urine, and the dropsy disappear. The compound jalap powder, as a purgative here, is far better than calomel and jalap, because the cream of tartar it contains is a good blood medicine, and the calomel a bad one. I advise calomel never to be used in this disease; but digitalis and cream of tartar are very suitable and serviceable. The cream of tartar, sulphate of potash and tartarized antimony —

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without the squalls — prescribed under *Dropsy,* is applicable here. The squalls would be too stimulating in this form of general dropsy.

Copping of the loins, when the patient's pulse is strong and hard, is generally a very necessary and beneficial measure; and if it sensibly relieves, it may be repeated two or three times a week. The hot-air bath or the vapour bath, should never be neglected, as it is eminently calculated to relieve the kidneys by acting on the skin.

I am now writing of dropsy from *kidney* disease; not from *heart* disease. These are distinct classes of dropsy. In dropsy from *heart* disease or feebleness, calomel and squalls form an excellent remedy, but not in that which originates from disease of the kidneys. If general dropsy has come on after scarlet fever, or after an attack of other fever, or the urine is of low specific gravity (below 1010) and albuminous, and the dropsical parts do not pit much upon pressure, then we may be almost certain that it arises from *kidney* disease.

The dropsical limbs, etc. may he greatly relieved by *acupuncture,* that is, by perforating the skin here and there, the perforation being two or three inches from one another, with a fine needle. The pent-up liquid trickles rapidly forth, and will often soak through the patient's bed, and run on the floor. If any redness appears after the punctures, strips of linen, wetted with Goulard water, should be laid over the inflamed surface. These incisions should be made in the thighs and scrotum, never in the legs; and great care must be taken to keep the part warm by the use of warm fomentation's and flannel.

In the CHRONIC FORM OF BRIGHT'S DISEASE, that in which there is a wasting of the kidney, and little or no dropsy; probably one of the most distinguishing signs is sub-mucous effusion at times underneath the white of the eye. It looks like a tear resting on the eyelid, but is really an accumulation of fluid beneath the thinnest skin of the *conjunctiva,* or white of the eye. Bronchitis, more or less severe, is apt to come on in winter, and pain in the head is a frequent symptom, with scanty urine. If *heart* disease is also present, which is sometimes the case, there are likewise scanty stools. Owing

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to the deficient secretion from the kidneys, excretory matter, which ought to have been eliminated by them, accumulates in the blood, and produces cramp in the limbs, and many uncomfortable sensations in the head and elsewhere.

This form of disease often exists for years without being discovered, or even suspected. The patient suffers from flatulence, dry mouth, pain in the back, indigestion, and scanty urine,— or from cramp in the legs, head-ache and general discomfort, and all this is referred generally to dyspepsia, liver complaint, or something else. Little can be done by *treatment,* beyond urging the sufferer to have recourse steadily to all those natural means of invigoration which have so remarkable an influence in promoting the general health; such as a nutritious diet of easy digestion, plenty of pure air and exercise, either on foot or horseback, early retiring to bed and rising, avoiding everything which distresses the mind. Quiet slow travelling or change of air to a very salubrious locality, every year, is of the utmost consequence. Only the mildest medicines can be used with safety. Some physicians recommend aperients to be taken frequently, to keep the bowels regular, but I am decidedly of opinion that this is a bad practice. It irritates both the bowels and kidneys, and therefore, the patient should regulate the bowels daily by sufficient exercise, friction, fruit, and the other natural means recommended under *Costiveness.* By a religious observance of these rules, people may live to a good old age, although they are affected to a considerable degree with the chronic form of this malady. But a neglect of them is sure to shorten life, by inducing bronchitis, complaints of the head or other dangerous affections. Mercury is poison.

Dandelion is a useful medicine in this complaint, particularly if the recent expressed juice can be procured. A wine-glassful twice a day is the proper dose. The skin is likely to become dry and rough, when an occasional warm bath may be beneficial, and the mixture of acetate of ammonia, No. 87A (or No. 73D), may be taken twice a day for ten days, then discontinued for the same period, and afterwards resumed for ten days.

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BRONCHITIS

This is an inflammation of the lining membrane of the air passages–the *bronchia,* and their ramifications through the lungs. Its prominent symptom is severe cough, and it is well known to be of frequent occurrence, and may be either *acute* or *chronic.*

The air tubes, or passages, are of vast extent. After repeated divisions and sub-divisions they terminate in small cells, upon the walls of which a minute hair-like network of blood-vesacle is distributed; and through the membranes which constitutes these cells, the atmosphere acts upon the blood, changing it from venous to *arterial.* This membrane is about *thirty times as extensive as the surface of the body,* and the lungs, therefore, constitute one vast excreting surface, pouring out constantly carbonic acid gas and water. In a healthy state, about a pint of water is excreted by it daily. These facts help to explain the cause of the severity of the pain, fever and difficulty of breathing in acute bronchitis, which is an active inflammation of the membrane lining the bronchial cells, the important functions of which membrane is then necessarily so seriously obstructed.

Acute Bronchitis

When a person suffers under an attack of *acute bronchitis,* the principal symptoms are lassitude and pains in the bank and limbs, irritation about the throat, great oppression in the chest, sometimes pain, aggravated by coughing or taking a deep inspiration. The cough is at first sort, frequent and without expecto-ration; and the tongue is furred, the skin hot and dry; there is thirst, headache, difficult breathings and a frequent pulse. Usually in two or three days the cough begins to be attended with the expectoration of a glairy frothy mucus, transparent and adhesive; if poured from one vessel to another it is extremely tenacious and viscid, and the degree of this indicates the degree of existing inflammation. The fever, difficulty of breathing, and oppression are now very great, and the disease may be considered at its height.

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After this, if the disease gives way to the treatment employed, the expectoration is looser, and becomes of an opaque white, and is mixed with pellets or portions of a yellow or greenish colour, which is a satisfactory sign of resolution or recovery. The expectoration is now called *ripe,* and the breathing becomes more tranquil, the pulse is more natural, and the fever subsides. Should the expectoration go back at any time to a state of transparency, stickiness and froth, and the fever return, that is an index of a return to, or increase of inflammation.

The most frequent *cause* of *acute bronchitis* is exposure to cold, or cold and damp combined, particularly when in a state of perspiration. This disease is common to children, and teething predisposes to it in infants. Luxurious habits give rise to it.

TREATMENT— Of course the patient should retire to bed, and send for his medical attendant. One of the best plans of treatment is at once to lay ten leeches over the chest, or to cup the patient between the shoulders to six or eight ounces, and to give a dose of the mixture, No. 78B, every tree hours, until the difficulty of breathing and cough are sensibly relieved, when it should be taken every five or six hours. If it produces nausea or sickness at the commencement, that will rather do good than harms and in continuing the mixture the sickness will cease. To clear the bowels, the purgative powder, No. 120, ought to be taken directly—the first thing; and the steam of warm water should be frequently inhaled, by means of an inhaler. It is very soothing and promotes expectoration. The diet should be of the mildest, blandest description, such as bread, gruel, barley water and tea, all of which should be taken lukewarm—certainly not hot; the patient returning to his ordinary diet by degrees. The cough will be relieved by taking a little of the mixture, No. 76, page 178, or 78C page 177, now and then, or by a dose of the linctus, No. 67A, page 173, when the cough is troublesome.

An emetic, as No. 123, page 206, given at the commencement of an attack of bronchitis is generally of uncommon service. It at once relieves the state of congestion of the blood vessels of the mucous membrane of the bronchia, which exists to a great degree

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in this disease, and it is especially useful in the bronchitis of infants. The best emetic far infants consists of four grains of ipecacuanha powder in a table-spoonful of water.

When the leeches drop off, cover the chest with a warm bran poultice, in a muslin bag, and renew it as often as it grows cold; and at the end of three or four days apply a large blister over the chest on going to bed. A mustard plaster is very proper, but it is not half so efficacious as a blister.

To procure rest at night some recommend opium, but I do not. It checks expectoration, and is here a dangerous medicine, and should *never* be given when the complexion is dusky, and the lips bluish. The best anodyne at night is the pill, No. 112A, page 201. If one of these pills at night is not sufficient to relieve the cough, try one, two or three times a day, until the disease and cough are .decidedly relieved, or try the powder, No. 124A, or No. 129, page 208.

If the pulse becomes exceedingly small, while the impulse of the heart is powerful, it indicates great obstruction to the passage of the blood from the right to the left side of the heart. Then ammonia and a little wine are clearly indicated, and the utmost quietude. Dr. Watson says, (*Practice of Physic*, vol. 2, p. 33) referring to symptoms of debility and sinking, "five or six grains of the carbonate of ammonia, given in solution every four or six hours, are often followed by free expectoration and a marked improvement".

In unfavourable cases the fever and difficulty of breathing increase, the lips, cheeks and fingers assume a purplish colour, a livid paleness is spread over the face, the expression of the countenance becomes more anxious, and the pulse becomes soft, irregular and intermittent. Then ammonia is one of the best remedies, and a dose of the mixtures No. 78D, should be taken every three or four hours.

Ammonia exercises specific influence on the *bronchia,* it is at once sustaining and expectorant; therefore should symptoms of debility and sinking supervene, which they are apt to do in old people suffering from an attack of acute bronchitis, and in

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intemperate persons, no medicine is equal to the combination of ammonia, prescribed in No. 42 in my book ON FEMALE DISEASES, or in No. 78D, page 181 of this volume, which is similar in composition. It subdues inflammation, without exhausting the patient's strength; facilitates expectoration, without stimulating the bronchia; allays irritation without oppressing the brain; and it relieves the lungs by maintaining a free action of the skin, kidneys and the other excreting organs.

In a state of exhaustion, particularly, in old people, and those who have been much accustomed to wine, a little wine may be allowed to the extent of two glasses a day, provided it does not increase the fever and difficulty of breathing.

Chronic Bronchitis

No complaint is more frequently met with than *chronic bronchitis* or *winter cough.* Its chief symptoms are cough, particularly in the winter, wheezing, sometimes difficulty of breathing, especially on lying down, deficient appetite, and considerable expectoration. If the walls of the bronchial tubes, and air cells, are much thickened and dilated, without great expectoration, there will be considerable wheezing, and the lips and ends of the fingers will be blue, the countenance bloated. In the severest cases, if the patient dies, it will be from suffocation. This arises from obstruction to the oxygenation of the blood in the lungs. But there is another kind of severe *chronic bronchitis,* in which there exists an excessive expectoration of mucus or pus, where the patient is in danger of dying from exhaustion, I mean in extreme cases. In this instance, the lips are pallid, and the patient emaciated.

But these two forms are seldom met with uncomplicated. They are usually more or less connected. When the expectoration its abundant, it is frequently half mucus and half pus, and part of it may be coughed up in round lumps, like coins, owing to the mucus having been for sometime lying in the dilated pouches of the bronchial tubes.

Generally, the expectoration is less glutinous, and more opaque

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than in the recent cough, and sometimes it is nearly puriform, that is, like pus or matter. Occasionally it is of a dirty greyish or greenish hue, from an admixture of the black pulmonary matter.[1] It is usually inodorous, but sometimes more or less fetid, and now and then assumes the smell as well as the other physical qualities of the different kinds of pus; having at one time the smell of good pus from a recent wound; at another, the strong odour of the contents of a large abscess, and occasionally approaching the gangrenous fetor. The quantity of the expectoration is variable; not unfrequently it amounts to one or two pounds in the course of twenty-four hours. It is increased on every fresh attack of cold.

This disease is very common in old persons, and is indeed, the most frequent infirmity of age. It is not rare in childhood, but seldom begins in the middle period of life. The repulsion of cutaneous eruptions, and the suppression of an habitual discharge, have frequently a decided influence in developing this disorder.

In advanced life, and particularly in those whose constitutions have been debilitated by excess, or by sedentary habits, a chronic cough is found, which is called the *pituitous* cough, from the expectoration being mostly colourless, transparent, ropy, frothy on the surface, and underneath like white of egg diluted with water. This is common in gouty subjects in whom the gout has lost its regular form, and become less strongly marked. It usually comes on by slow degrees, and when this pituitous discharge is once fully established, it becomes frequently intermittent, and sometimes with considerable regularity. There are generally two fits of cough and expectoration in the twenty-four hours, the one on waking from sleep, the other in the evening; but not unfrequently the fits immediately follow the patient's meals. The quantity of fluid

1. There is a black matter deposited in great abundance in particular parts of the cellular membrane of the lungs, and it is from this substance, which is not a diseased secretion, since it is always found in adult lungs, that the small black dots sometimes observed in the pearly sputa of the dry cough are derived; as also the blackish or grey colour of certain kinds of mucous expectoration, and the greyish tint occasionally exhibited by the matter of pulmonary abscess, which resembles a mixture of pus and ashes. This black matter is not found in the lungs of young children. In adults and elderly persons it is more or less abundant; while in very old subjects it, perhaps, is found in less quantity.

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expectorated is always very great; some patients discharge in the course of one or two hours from two to three pounds.[1] Difficulty of breathing always accompanies the attack, and when the disease has existed some time, the countenance assumes a pale bluish tint, and the body becomes emaciated. In this state the complaint may exist a great many years, but as age advances, the fits become longer and more frequent, the difficulty of breathing becomes habitual, and the disorder then acquires the name of *Asthma*.

The chief causes of chronic bronchitis are sudden exposure to cold air, especially if associated with dampness; living in highly heated rooms; the constant use of Arnoffs stove; intemperate habits; exposure to cold night air. Arnott's stoves are apt to produce a slight feeling of constriction and distress within the chest. In the lower orders, the manufacture of needles, cutlery, pottery and certain textile fabrics, are provoking causes of bronchitis, by mechanically irritating the air passages, and by diffusing grit, or dust of flax or cotton, which are inhaled during the process of manufacture. Bronchitis often accompanies other diseases, such as measles, continued fevers and affections of the heart and kidneys.

It is the internal or mucous membrane of the *bronchial tubes* which is chiefly, and very often exclusively, affected in cough, whatever may be its distinctive character, a redness and thickening of flat membrane being the chief visible appearances.

TREATMENT—In this complaint the tonicity of the bronchial tubes; and of the constitution generally, is deficient, the habit is relaxed, and the blood impure. Therefore, every thing debilitating is to be avoided, and every thing mildly invigorating to be used. Should the patient be resident in a large town, he ought at once to

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1. M. Laennec says, (*Treatise on Diseases of the Chest*, page 85), I am acquainted with two old gentlemen, one of whom, upwards of seventy, has expectorated during the last ten or twelve years, in two daily paroxysms, about four pounds of a colourless, ropy, and frothy fluid, The other brings up every morning by gentle spontaneous vomiting, repeated at short intervals, during several hours, from three to six pounds of a liquid exactly like white of egg, mixed with a third part of water. This gentleman is upwards of sixty, enjoys tolerable health, and walks several hours every day. Some patients, however, die of exhaustion within a mach shorter period, and from a much smaller discharge.

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remove into the country, to a moderately bracing air, such as Dorking, Reigate, Clifton or Epsom.

I strongly recommend the following plan of treatment. Take the mixture, No. 78A, during the day, and one or two of the pills, No. 104 or 107, every night at bed time. Rub the chest well night and morning with the liniment, No. 46, page 163, and observe the general principles laid down above, together with a diet easy of digestion. To old persons accustomed to wine, two or three glasses a day may be useful. The mixture, No. 78A, is particularly valuable, especially when the expectoration is abundant. One of the pills, No. 112A, page 201, taken every night for a week, or every other night for a fortnight, will relieve feverishness and cough, and assist materially in the recovery of the patient. Should the patient require a tonic, the pills, No. 106 or 106A, may be found serviceable, with which a good deal of exercise should always be conjoined. Horse exercise is particularly to be recommended.

The plaster, No. 131, page 210, or that marked No. 136, will be found useful if applied to the chest.

Make use of those means which have the power of strengthening the general habit as well as the pulmonary organs. Tonics, with the warmer and more pungent expectorants, are chiefly indicated; such are the forms No. 76A, 77, 102, 105, or 106, pages 179, and 196-198. The pills, No. 106A, are particularly useful in cases of some standing. The following are likewise very efficacious.

Take of Carbonate of iron ..... 20 grains;
Myrrh, in powder..... 1 drachm;
Ginger, in powder ..... 20 grains;
Mucilage of gum arabic, a sufficient quantity to make the whole into a mass, to be divided into twenty pills. Two to be taken twice a day.

Take of Myrrh, in powder ..... 2 drachms;
Sesqui-carbonate of ammonia, in powder .... 1½ drachms.
Mix, and with a sufficient quantity of extract of gentian, make into forty pills;— two or three to be taken twice or thrice a day.

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As people are very fond of taking laudanum, paregoric, or some other form of opium, for cough, I strongly advise them not to indulge in it when the lips are bluish and the complexion dusky. *See* the *General Principles,* page 345. Many persons are seriously injured by taking opiates for coughs, especially aged people. *Godbold's Balsam* is useful.

It must be admitted that there are many cases, in which the long continuance of the disease, and the age and debility of the patients, afford slight grounds for hope of a cure, even from an appropriate mode of treatment; but there are others, on the contrary, in which the practitioner too soon despairs of success, and consequently renounces the use of means which are really efficacious. Among these means, emetics of ipecacuanha are frequently useful, repeated according to the patient's strength and his power of supporting their action. M. Laennec says, "I have cured, in this way, coughs of long standing in old persons and still more in adults and children. In the case of an old lady of eighty-five, who had laboured under a chronic cough for eighteen months, with an expectoration amounting to two pounds daily, I prescribed fifteen emetics in one month, and with complete success, as the patient lived eight years afterwards free from complaint". After the use of emetics, mild tonics should be administered, especially No. 106A.

Tar water was at one time a famous remedy in old coughs, and is sometimes useful. The tar vapour is also an appropriate means, and seems to be more beneficial here, than in any other kind of cough[1]—that is in *chronic cough, or bronchitis*. But the compound tincture of Benjamin is still more useful. The dose is from half a tea-spoonful to a tea-spoonful, in mucilage of gum arabic, thrice a day, together with a little syrup of tolu. I am partial to the following mixture, which is sustaining :

1. Dr. James Forbes states, in the *Medical and Physical Journal for October,* 1822, that he had tried the tar vapour in chronic cough in one of the military hospitals, and that of thirty-two cases, it had produced a cure in eight, an improvement in six, no effect in eighteen, and a bad effect in none; and this, I think, may be considered as a fair average of its probable effects in this complaint.

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Take of Compound tincture of benjamin.....		half an ounce;
Thin mucilage of gum arabic.....	6½	ounces;
Sesqui-carbonate of ammonia		half a drachm;
Syrup of tolu	1	ounce.

Mix, and take three table-spoonfuls,when the cough is troublesome.

Cough is often only *symptomatic,* originating chiefly in some affection of the stomach, bowels, liver, kidneys or other distant part; hence the terms *stomach* and *liver cough.* It assumes the general symptoms of chronic mucous cough; and it is worthy of particular notice, that it is extremely rare for a symptomatic or sympathetic cough to establish itself without there having previously existed a dry or *latent* cough, that is, a thickening or congestion in the mucous membrane of the bronchia. Under the existence of this congestion, disorder of the digestive organs, etc. is very likely to develope troublesome cough.

In this kind, the patient seldom coughs when he draws in his breath fully; which he commonly does when the cough is owing to a fault in the chest. The symptomatic cough is to be cured only by those means which invigorate and enliven, such as active exercise in the open air, especially on horseback, with frequent changes of scene, regulation of the bowels and tonic medicines. The pills, No. 101D, 102, 103, 104, 105, 106 or 106A, page 198, will be found useful. When the flowers of zinc were in the height of their popularity, some years since, they were supposed to be an unfailing remedy for nervous cough, and Dr. Percival of Manchester, has given numerous examples of their complete success. *The stomach cough* will be known by its being attended with a weak state of that viscus, and many of the usual symptoms of disorder in the digestive organs. Generally there will be a confined state of the bowels, acrid eructations, and a deficient or faulty biliary secretion; and the alterative pill, No. 98 or 98A, or No. 99, page 192, every other night, will be of great service. An occasional emetic of ipecacuanha powder is advisable. The pills of hemlock and ipecacuanha mentioned at the end of HOOPING COUGH, have been in some cases of signal service. I have been informed of one or two

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persons who were cured by them, having taken the prescription from a former edition of this book, and who appeared to be in an advanced stage of consumption.

Every person should pay attention to a cough, and especially those who are delicate, and have weak lungs, as a neglected cough is frequently followed by troublesome and dangerous consequences. Those who are much subject to coughs ought to avoid the night air, crowded cities, and elevated spots of ground; and they should sponge the whole body every morning with salt and water. The embrocation No. 45, page 163, rubbed on the chest, is an eligible remedy in the coughs of infants.

Suffocative cough is a variety of bronchitis occurring in very young, or in aged persons, and in those of a bad habit of body, with lax fibres and exhausted bodily powers. Very often they have been liable to chronic coughs, and it may be to considerable expectoration. Its chief symptoms are severe fits of coughing, with wheezing and suppressed breathing; fur-loaded tongue; loss of appetite; quick, small, sometimes irregular pulse; cold extremities; pain in the head. In the severest cases, the countenance is pallid and anxious; the oppression of breathing great; a full breath brings on a severe fit of coughing.

Not only are old people subject to this form of *bronchitis,* but it is the most common form in which it is met with in the children of populous cities, and among those of the poor, who are ill-fed, ill-clothed, and those living in cellars, and badly ventilated courts and apartments. It is that form of bronchitis which is so remarkably prevalent during the winter and spring, among the ill-fed, weakly and aged.

The treatment of this *suffocative* cough chiefly consists in giving frequent small doses of tartar emetic, or ipecacuanha, and other expectorants, together with ammonia and demulcents, as the mixture, No. 78D, page 181, and the compound decoction of barley, page 146. Both the chest and spine should be rubbed with a strong liniment, such as No. 46, page 163, and the mixture, No. 78A, page 180, for *chronic bronchitis,* may be given with great success. The ammonia sustains the patient at the same time that the squills

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promotes an easy and copious expectoration, to the sensible and immediate relief of the patient. The liniment should be well rubbed into the chest and spine three times a day. The bowels should be regulated by an occasional dose of tincture of rhubarb and a little magnesia, or a little Gregory's powder, No. 121A, or by the pill, No. 100 or 101, page 194. And two of the pills, No. 107, page 199, taken every night at bed-time, will be found a valuable adjunct, with the view of tranquillizing the patient for the night, and promoting an easy expectoration on the following morning. The diet should be very sustaining. The children of the poor should be well sustained with arrow-root, isinglass jelly, mutton broth and beef-tea.

Cox's Hive Syrup is a celebrated remedy in this complaint, equally applicable for children and old persons. A full description of it will be found in the author's book *On Infancy and Childhood.*

Bronchocele

On the fore-part of the neck a gland is found, called the *thyroid gland,* which is not perceivable in a healthy state of the body, but which sometimes enlarges to a considerable size, so as to deform the person and impede the breathing. This is called *bronchocele,* or *Derbyshire neck.* It is *endemical* in Switzerland, where it is called *goitre.*

It usually appears as a soft and rather flabby swelling, lying across the fore-part of the neck, extending more or less to each side; and when much increased in size is pendulous. Sometimes it is irregularly swelled, in some parts soft and others hard. It is free from pain and is not discoloured.

It rarely appears in males, and is most commonly found is certain unhealthy districts, especially in the low, moist, and marshy valleys of Derbyshire, Nottinghamshire, Sussex, and Hampshire, in this country; and on the continent, those of Savoy, Switzerland, and Tyrol. The causes of this disease are enveloped in some obscurity, at least as it appears in many healthy parts of this country; yet it is generally found in girls of a delicate and loose fibre, and is

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not unfrequently connected with some kind of irregularity or disorder in the complaints peculiar to women. The drinking of hard spring water strongly disposes to the disease, if it does not actually cause it. It appears to me to be quite sufficient for its production. Captain Franklin says, that at Edmondstone, a part touched at in his journeys to the Polar sea, bronchocele greatly prevails in those who drink the river water, and that those who use melted snow escape. He asserts, that a residence of a single year at this place is sufficient to give rise to the disease in a whole family, if they drink the common river water.

Occasionally tumours of a different description appear on the fore-part of the throat, but they are easily distinguished from bronchocele, by their more rapid rise,—redness of the surface,—pains and increased temperature.

TREATMENT—Many remedies have been recommended for the cure of this affection, but *burnt sponge, iodine,* and preparations of iron, are those only which can be depended on. I have some confidence, likewise, in mild mercurial alteratives at night, and tonic medicines, with a good air and diet, during the day. It is said that galvanism, with friction over the swelling with the iodine ointment, has completely removed a bronchocele, although neither was successful alone.

The burnt sponge may be taken in doses of ten or twenty grains, three times a day, in a little calf's-foot or currant jelly; or the patient may take the following pills, which is sometimesa more eligible form of administering burnt sponge.:

Take of Burnt sponge ..... 2½ drachms;
Carbonate of soda ..... half a drachm;
Extract of gentian, a sufficient quantity to make the mass.
Divide it into thirty-six pills, of which take three twice or thrice a day.

But the plan which I particularly recommend is, to take eight or twelve drops of *the solution of iodide of potassium* (made by dissolving half a drachm of *iodide of potassium* in one ounce of

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distilled water), three times a day in barley-water, augmenting the dose after ten days, to twenty drops, thrice a day; accom-panying it with the use of a mild alterative pill, composed of two grains of carbonate of iron, two grains of rhubarb and one grain of extract of henbane, every night. Or, instead of this pill, should there be disorder of the functions peculiar to women, one or two tea-spoonfuls of the electuary, No. 37, page 160, may be taken every night.

Another plan which I have adopted with success is, to rub a little of the ointment of *iodide of potassium* into the swelling, night and morning, or, (what appears to be still better), a little of the ointment of iodide of lead, or *iodide of cadmium,* giving twenty or thirty drops of the tincture of muriate of iron, twice a day in water.

The diet in all cases must be mild, nourishing, and easy of digestion. If there exists a good deal of debilit or delicacy in the habit of females in whom bronchocele is found, the tepid bath, at 95 degrees, may sometimes be advantageously employed thrice a week, especially if uterine obstructions are present; or during the heat of summer, cold sea-bathing may tried.

The continued use of burnt sponge, or iodine, not unfrequently produces constitutional disturbance, indicated by pains in the limbs or joints, or faintness, trembling, palpitation and other nervous symptoms; its effects must consequently be carefully watched. Considerable emaciation is a common consequence of the efficient use of iodine, but this we need not regard much, provided no other unpleasant symptoms arise; since by the use of quinine or steel or other tonics, with a generous diet and change of air, after the iodine has been discontinued, the patient's original plumpness may be restored.

Those who are able should remove their residence to a more salubrious part of the country, which has better water. I have lately been credibly informed of a case in which the female on removing from Mattock to Deptford, near London, for a time, quite lost her bronchocele, without the use of any other means, and which returned after her return to Matlock.

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BRONZED SKIN

This is a disease of a very peculiar nature. The whole surface of the body is discoloured, or bronzed, but particularly the face neck and arms. The shades of colour are various, being dingy, deep amber, chesnut brown or bronze. The pulse is small and feeble, or if large it is extremely soft and compressible; the appetite is impaired or entirely lost; the sufferer is languid weak and incapable of exertion; the whites of the eyes are pearly and the body wastes. The characteristic condition is one of bloodlessness, emaciation and exhaustion.

All these symptoms arise from a peculiar disease of small bodies, called capsules, lying above the kidneys.

TREATMENT—The disease is incurable. Hitherto it has always been fatal; and the sufferer is evidently called upon earnestly to prepare for another world. Here the Holy Scriptures are the best guide.

All strong medicines will do harm. The patient should on no account take mercury in any form, nor iodine, opium or purgatives. The powder of sarsaparilla is the only medicine I think worthy of the least confidence.

But many cases of bloodlessness, emaciation and exhaustion occur in which there is no disease of the capsules of the kidney; and from which the patients perfectly recover. Such a state may follow great loss of blood, exhausting diarrhoea, green-sickness, consumption or glandular obstructions; and it is important to draw a line of distinction, which an able professional man will always be able to do. The peculiar *bronzed* condition of the skin, and the wasting of the body will usually clearly distinguish it from ordinary bloodlessness and exhaustion.

BRUISES AND SPRAINS

The best treatment for the slightest kinds of bruises and sprains, consists in giving rest to the part affected, and using one of the embrocations, Nos. 39, 40 or 45, page 163, three or four times a day.

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The severer description of bruises may require the application of six or eight leeches to the part, or even make it desirable that eight or ten ounces of blood should be drawn from the arm, the patient afterwards keeping the parts perfectly at rest, and applying a poultice of linseed meal and vinegar, or crumb of bread and vinegar. This treatment may be required, because of the tendency to inflammation, or actual inflammation resulting from very severe bruises. But in general severe bruises will get well by the use of the bread and vinegar poultice alone. When all consequent inflammation has subsided, one of the above embrocations may be used with daily frictions. It will frequently be necessary at the same time, to attend to the state of the constitution, supporting it by tonic medicines, and proper diet when weak, and correcting it by alteratives and aperients, when disordered.

If a weakness be left behind in consequence of a sprain, cold water may be pumped every morning upon the part, and a calico or laced, or adhesive plaster bandage worn to support it.

BURNS AND SCALDS

Burns may be divided into *three states,* or *conditions,* which division is a natural one, and absolutely necessary to be attended to, in order to their being treated with safety and success.

The first is, where the injury consists in a simple blistering of the outer, or scarf skin, which remains unbroken.

The second is, where the outer, or scarf skin, is extensively separated from the surface of the true skin, so that the minute extremities of the nerves are exposed, which is most frequently the case from the application of fire.

The third is a still deeper injury, in which the life of the true skin is destroyed and where the process of suppuration is absolutely necessary.

TREATMENT–The danger of *the fist state* is but little, provided the vesications or blisters are not disturbed. It is a principal object to keep the blister from breaking, as a considerable discharge would come on, creating great irritation and consequently danger. Cold

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applications are the best in these cases. The lotion, No. 69, page 173, added to half a pint of water, will be proper, and may be applied cold by means of linen cloths dipped in it, which should be frequently renewed; or cold water, vinegar and water, or scraped potatoes, may be used. When the heat and inflammation have subsided, leave these off, and apply a liniment composed of three ounces of olive or linseed oil added to six ounces of lime water; or dress the parts with the Gonlard ointment, No. 94, page 190, spread on fine lint, or with an ointment consisting of equal parts of the lead and zinc ointment *(unguentum plumbi et unguentum zinci).*[1] I have found one drachm of Turner's cerate, mixed with three drachms of white cerate, a very soothing application, when the saturnine ceate ceased to agree.

There is one case in which it is not advisable to employ cold water, namely, in cases of extensive scald. It appears that when the scald extends over a considerable part of the body, the system feels the injury so much, and is so much disposed to flag, that the use of cold applications materially depresses the vital powers and prevents a reaction.

Some American practitioners have asserted that the best application for superficial burns is *raw cotton*, thinly spread out, or finely carded and put directly on the injured parts. Many surgeons of our own country have reported of it very favourably. If its application causes pain, it is not suitable.

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1. "When the hot fluid has been directly applied to any exposed surface, as the hands, the speedy employment of the antidote, cold, will often prevent vesication", (blistering) "and the case will terminate by resolution. It more commonly, however, happens, that the part affected is at the time enveloped in some article of clothing, as the legs and feet with stockings; in which case more or less vesication is likely to occur, from the clothes retaining the hot liquid in contact with the skin. It unfortunately happens too frequently, under these circumstances, that the first thing that is done is to remove the stockings or clothes, which never fails to bring away with it large portions of the *cuticle*", (external skin), "leaving the highly inflamed cubs"; (true skin) "quite denuded. If, instead of this forcible removal of the clothes, such limbs were to be immediately immersed in the coldest water, this most serious result would generally be prevented".—Eanle's *Lectures on* the *Treatment of Burns*. When it is requisite to remove the dress covering the part scalded, it should be very carefully cut away.

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The danger attending on the *second state* described, is greater than in the preceding, owing to the increased sensibility of the parts, and the instant suppression of the natural functions of a large portion of the skin, and death may take place soon after such an accident, when extensive. In this case, the pulse is quick and small, the patient frequently chilly, and, if the termination is unfavourable, he ultimately falls a victim to the first impression. The best practice here is to apply lime-water end milk, in equal proportions, as a lotion; or the liniment of olive oil and lime water, which may be frequently spread over the parts with a pencil or feather.

Take of Lime-water, olive or linseed oil, of each, half a pint.
Mix them, for a lotion.

At the same time, it will be right to give the patient a little warm wine and water occasionally, especially if chilliness is complained of, and about ten, fifteen, or twenty drops of laudanum, or of Battley's solution of opium, should be given once or twice in the first fourteen hours. As to the quantity of laudanum to be given, however, we must be guided by the pain, and symptoms of irritation, or of exhaustion present. The stupor with which patients severely burnt are often attacked, receives more relief from opium than anything else. If a good deal of irritation and fever be present, the fever mixture, No. 81, page 183, should be given through the day until it is removed. A little mild aperient medicine will also be advisable; and the diet during the period of the symptomatic fever should be, for the most part, of a mild vegetable and farinaceous description. After a short time, the parts granulate, and throw up small red eminences, which is a necessary process previous to healing, when the following lotion ought to be applied by means of linen rags, and it will promote the formation of a new skin, even over an extensive surface.

Take of Sulphate of zinc ..... 12 grains;
Cold water ..... half a pint.
Mix them together.

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In *the third state,* though there is no immediate danger, yet there is a remote one; for the skin being destroyed, separates and forms an eschar, which must naturally debilitate the living powers, by calling on them beyond their natural capacity. In this condition, we find stimulating applications of the greatest service. The injured parts are to be bathed two or three times with spirit of wine, or spirit of wine with camphor or spirit of turpentine. After this, let a liniment be applied on soft cloth, composed of the common yellow basilicon, softened with spirit of turpentine. This should remain on untouched for fifteen hours. At the second dressing, wash the parts with proof spirit of wine, or tincture of opium made warm, and then dress as before with the common yellow basilicon, softened with camphorated oil instead of turpentine. On the third day milder applications must be employed, and a dressing once in twelve hours, of the Goulard ointment, No. 94, or Turner's cerate, No. 95, will be most proper. Powdered chalk may be used to absorb any great degree of discharge from the ulcer.

It is not in general proper to give strong purgatives in burns. We must be cautious in the administration of this class of medicines, as *diarrhoea* is very apt to follow severe burns. The *diarrhoea* is usually the consequence of inflammation of the mucous or serous membranes of the abdomen. According to Baron Dupuytren, a French surgeon of celebrity of the present day, extensive and deep burns always occasion inflammation of the mucous or serous membranes of the digestive organs; a circumstance supposed to explain those curious instances of deaths which so often occur when the ulcers are on the point of healing.

When burns are produced by gunpowder, some of the grains may be forced into the skin; these should be picked out with the point of a needle, and an emollient poultice applied, which will dissolve and bring away any particles of gunpowder yet remaining.

In this third state, of deep burns which must ulcerate, stimulants internally are likewise advisable, and a dose of laudanum should be administered after the receipt of the injury, proportionate to the age of the patient and the severity of the symptoms. A little wine and water or beer, should follow occasionally, till suppuration takes

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place, when any stimulant will no longer be required, excepting in a very moderate quantity, to support the strength under any great discharge.

In severe burns and in warm weather, should the discharge be profuse and the fetor considerable, there may be a generation of maggots and a daily change of the dressings be called for; in which case the application of a solution of the chloride of lime is very beneficial. Two grains of the chloride of lime may be dissolved in an ounce of water, and lint moistened with this should be kept laid over the burnt parts, or the solution of chloride of lime or soda, sold in the shops, may be used according to the directions accompanying it.

In deep and extensive burns, Mr. Abernethy warns us, in his Lectures, against continuing the stimulating plan too long (it should seldom be continued beyond the third day). By so doing, the patient will be brought into great danger. He cites the cases of the men burnt at Covent Garden Theatre, all of whom that were in Bartholomew's Hospital, died in a few days of an extraordinary nervous affection, although they were previously apparently doing well. The sudden and fatal alteration he attributes to their friends having privately brought them wine and other cordials, so that they lived too freely.

Houseleek and cream mixed together, and applied to the parts burnt, form a very excellent application, so soothing and efficacious, that it may be used to the tenderest parts with the most gratifying results. Nothing is more healing, and it does not require to be removed, for it will separate of itself when the parts underneath have sufficiently recovered. One layer of houseleek and cream may be laid over another daily, if necessary. The best way is to pound the houseleek well in a mortar, and mix an equal quantity of cream with it; then the burnt parts can be covered with this mixture by means of a feather or camel's hair pencil; and in the most extensive burns in the face and limbs, this has been found sufficient to effect a cure.

Mr. Cleghorn's plan of managing these injuries may frequently be adopted with advantage. This gentleman, who was a brewer at

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Edinburgh, was induced to pay great attention to the effects of various modes of treating burns, on account of the frequency of those accidents among his workmen. He preferred the application of vinegar, which was to be continued for some hours, by any of the most convenient means, until the pain abated; and when this returned, the vinegar was repeated. If the burn had been so severe as to have produced a destruction of parts, these, as soon as the pain had ceased, were covered with a poultice, the application of which was continued about six, or at most eight hours, and after its removal, the parts were entirely covered with very finely powdered chalk, so as to take away every appearance of moisture on the surface of the sore. This being done, the whole burnt surface was again covered with the poultice. The same mode was pursued every night and morning, until the cure was complete. If the use of poultices relaxed the ulcers too much, a mild ointment, (as No. 94, page 190), was applied; but the chalk was still sprinkled on the sore.

In cold weather, Mr. Cleghorn sometimes warmed the vinegar a little, placed the patients near the fire, gave them something warm internally, and kept them, in every respect, in a comfortable situation. His object in doing so, was to prevent or lessen the symptoms of trembling or chilliness.

There has been a great difference of opinion among medical men respecting the proper treatment of burns, some recommended cold applications, others hot stimulating ones, and this has arisen from want of attention to the degree and kind of injury inflicted. The above directions may be depended on. They are the result of correct observation and experience, and contain the general practice of Sir Astley Cooper and other eminent surgeons.

It should be remarked that burns occasioned by hydrogen gas, (which are so frequently occurring in the extensive pits and works of the North of England), differ in their nature from those arising from other causes, and require a somewhat different treatment; inasmuch as the former, although rather slight, require a stimulus, even from the beginning, which the others do not. It is in burns from the explosion of hydrogen gas, sometimes called choke damp,

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that the oil of turpentine is so very beneficial, as advised under the third variety in the preceding page.

CANCER

Cancer is a hard tumour, intersected with firm, whitish, divergent bands, found chiefly in the excretory glands or skin, which is capable of contaminating other parts, either by direct communication or through the medium of the absorbents; is attended with acute and lancinating pains, and generally terminates in a fetid and ichorous ulcer. Its most common seats are the female breast and womb, the lip, tongue and private parts.

When cancer takes place in the breast, it usually commences with a small indolent tumour that excites little attention. In process of time, this tumour is attended with an itching, which is gradually exchanged for a pricking, a shooting, and at length a lancinating pain, a sense of burning, and a livid discoloration of the skin. And however difficult it may be to determine the precise point of time in which the scirrhus first becomes converted into a cancer, where these symptoms are united, there can be no risk in calling the tumour by the latter name. Adhesive bands are now formed in the integuments, which become puckered; while the nipple is drawn inward by suction, and in some instances wholly disappears; the tumour rises higher toward the surface, and feels knotty to the finger; at the same time that the subcutaneous vessels are distended with blood, and show themselves in dark contorted ramifications. The march of this disease may be slow or rapid, for it varies considerably in its pace; but at length the integuments give way in a few points to the ulcerated process, and a small quantity of caustic ichor is thrown forth; the ulceration continues to advance, spreading wider and deeper, till a considerable extent of surface becomes exposed, and a broad excavation is scooped out, with a discharge of a most peculiar and offensive fetor. The ulcer sometimes affords a delusive hope of recovery by its granulating; but the granulations are soft and spongy, and liable to bleed from the loose texture of the new vessels, and frequently while one part is covered with them, another part is sloughing.

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When cancer attacks the uterus, it is known by tensive lancinating, pains in this organ, shooting through the region of the pelvis; indurations in the part, sensible to the touch; a preceding and immoderate flow of the whites or menses, or both. As soon as the ulceration has worked to the surface of the organ, there is a sanious or bloody, or mixed discharge, characterized by the peculiar stench of the disease. By degrees, the eternal parts swell, and the swelling sometimes extends along the thigh.

On the tongue, lip, or any outer part of the skin, which is attacked by this disease, it usually commences with a small wart or pimple, which hardens by degrees, grows irritable and malignant, contaminates the neighbouring glands, and finally ulcerates.

Cancerous affections of the lip and skin are more within the control of art than those of the breast or womb; indeed, I have much reason to believe that the former are often curable when properly treated from the beginning.

A cold and variable climate; a deranged state of the general health; the change effected in the constitution of women at the time when the usual monthly discharge altogether ceases; with blows, and other mechanical violence, are the most common *exciting causes* of this complaint. But frequently there is no a parent cause, and when any of the above exist, we must almost invariably consider a disposition in the organ or part affected to take on the diseased actions of cancer, to be necessary to the actual development of this particular malady.

The *distinguishing marks* of this disease are its stony hardness to the feel; its being perfectly circumscribed, so that its whole extent and limits, unconnected with the surrounding parts, may be distinctly felt; its never or very rarely, occurring but in the excretory glands or skin; and especially its power of contaminating other parts in its vicinity, either by direct communication, or through the medium of the absorbents.

TREATMENT–In whatever part the disease may be situated, the treatment resolves itself into that proper when the cancer is unbroken, and that which is required when there is ulceration, or open sore. The former is called occult, and the latter ulcerated cancer.

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In the scirrhus, or unbroken cancer, the best local remedies are those which are colling and astringent, being calculated to repress inordinate or irregular action in the blood-vessels of the part, and to promote absorption; with which alterative and tonic medicines must be given internally. The lotion No. 68, page 173, will be found useful, or one of the following. Whatever lotion is used, it must be applied by means of linen rags, four or five double, which are to be kept constantly wet, and closely applied over and around the tumour.

Take of Solution of acetate of ammonia ..... 3 ounces;
Rectified spirit of wine ..... 1 ounce;
Water ..... 2 ounces.
Mix them.

Take of Carbonate of iron ..... 2 drachms;
Distilled vinegar ..... 2 ounces;
Water ..... 12 ounces.
Mix them.

The ointment of iodide of potassium, made by mixing together a drachm of iodide of potassium, and an ounce and a half of recent hog's lard, frequently relieves the pain of cancer, and is sometimes of very signal service in lessening the size and hardness of such tumours. It will not unfrequently disperse very suspicious tumours in the breast and other parts. The size of a nut may be rubbed into the part twice a day, but its use should be discontinued for a week or two occasionally; because from being a very active medicine, it will not be proper to continue it for any length of time, without intermission. This ointment may now and then be advantageously alternated with the application of a warm bread and water poultice, or a poultice made with figs boiled in milk. The latter has been of great service.

The employment of a little camphorated mercurial ointment, rubbed into the tumour twice a day, is another local measure in common use among medical men, and those who wish to try it may use about the size of half a nut, at each time; but it appears to

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me to be of very doubtful advantage. It is by no means so powerful a discutient as the iodide of potassium.

It is a very usual practice to apply leeches to the swelling, but I have never known any permanent advantage arise from it, and question whether it be not generally hurtful. I am aware the discharge of blood sometimes affords relief, but the benefit is transitory, and when the application of the leeches has been discontinued, it has appeared after a short time to have really tended to increase the rapidity of the subsequent progress of the disease. On this account I could not advise it, and believe that the most eminent surgeons are likewise averse to it.

All cancerous diseases are aggravated by debilitating measures, and relieved by those which strengthen, and which have the power of exciting a new and salutary action in the diseased parts. Therefore, in every case of cancer, every thing which weakens must be studiously avoided, and tonic and alterative medicines internally be conjoined with external applications. The alterative pill, No. 98, page 191, taken every other night, will occasionally be found very useful, and may be accompanied with the strengthening pills, No. 102, through the day, or the following:

Take of Sub-oxy-phosphate of iron ..... 2 drachms;
Ipecacuanha, in powder ..... 8 grains;
Aloes, in powder ..... 3 grains;
Mucilage of gum arabic, a sufficient quantity to form the whole into a mass.
Divide it into thirty pills, and take first one, then two twice a day.

Sir Astley Cooper recommends the following tonic draught to be taken twice or thrice in the day. I advise the soda to be omitted, as it is evidently prescribed here from a mistake respecting its properties and effects.

Take of Compound infusion of gentian ..... 1½ ounce;
Tincture of columba ..... 1 drachm;

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Carbonate of ammonia..... 5 grains;
Carbonate of soda ..... 10 grains.
Mix.

The extract of hemlock, *prepared in vacuo*, is sometimes very serviceable. It has appeared to me to have more power over the cancerous diseases of persons advanced in years than of those who are not aged. Four or five grains of this extract may be made into a pill with a little powder of hemlocks and taken three or four times a day. After a short time the dose may be increased to two, or even three pills thrice daily.

The juice of clivers, taken internally, is said to have been useful in several instances, in removing suspicious enlargements in various parts, and improving the condition of the general health. The compound decoction of sarsaparilla, (or the powder or extract of that substance), is also often a good medicine both in ulcerated and unbroken cancer, and it may be taken together with or without any of the pills above described.

There is reason to consider arsenic a medicine of some value in many cases of cancer, whether in a state of tumour, or open sore. It improves the discharge from open cancer, retards .the progress when unbroken, and in some instances has dispersed the disease completely. The patient may begin with three drops of the arsenical solution, twice or thrice a day, in barley-water, and gradually increase it to six or eight drops; but it is so active a remedy that it will require great caution in its exhibition.—*See Arsenic,* page 7.

The best treatment in ulcerated cancer, consists in administering those medicines which have the power of invigorating and amending the state of the general habit, and in applying to the ulcer articles which are capable of stimulating the sound parts to throw off those that are diseased, and of so altering the diseased condition of action in the vessels of the sounder parts that they may heal. The internal remedies are, therefore, the same as above described for unbroken cancer. The most powerful local applications are arsenic, arseniate of iron, carbonate, phosphate or oxy-

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phosphate of iron, tar ointment, iodide of potassium, and poultices of mallow leaves, figs or bread and water.

Take of Crow's foot, dog's fennel,
fresh gathered, of each ..... 1 ounce;
White arsenic ..... 1 drachm;
Flowers of sulphur ..... 5 scruples.

Bruise the crow's foot and dog's fennel together, then add the other ingredients, and beat the whole into a paste; then form this into balls, and dry it in the sun.

When used, they are to be powdered, a sufficient quantity mixed with the yolk of an egg, and applied on a piece of bladder, to the ulcer. In this state the caustic is to remain, till the part which it destroys separates spontaneously; when another plaster may be applied in the same way, till it separates its portion, and so on till the whole of the diseased surface is brought away, when a common healing salve, as No. 94 or 95, page 190, may be used. This is the once famous Plunkett's powder. I am inclined, to think it is not without efficacy in some cases, but its great activity requires it to be used with much caution, and only under surgical advice. It is not so safe as the chloride of zinc.

The arseniate of iron, however, is a milder and more manageable remedy, and perhaps equally efficacious, or more so. A scruple may be mixed with the white of an egg, and applied to the ulcer by means of a camel's hair pencil, and renewed when the slough separates. The chloride of zinc is often still more efficacious than the arseniate of iron. See the author's book *on the Diseases of Females.*

Or the ulceration may be dressed twice a day with carbonate or oxy-phosphate of iron, mixed with a little water, or white of egg. In many cases these are of great advantage.

Tar ointment combined with sulphur has been very useful, and ample directions for its use will be found in the author's book ON FEMALE DISEASES.

Whatever powder is made use of, occasional poultices, to bring

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away the discharge and separated portions of the ulcer, are proper and beneficial.

The iodide of potassium or cadmium has great effect in mitigating pain, and improving the discharge of cancerous ulcers. A drachm may be mixed with an ounce of simple syrup, and a little of this solution laid over the whole ulcer, twice a day.

Patients afflicted with the present disease are often obliged to have recourse to opium in some form. The best preparations of opium, in such cases, are Battley's *solution of opium* and the *muriate* or *acetate of morphia*, or the *Black Drop*. They are exceedingly valuable in relieving pain, and in regard to the dose proper in such cases see the remarks at page 97.

The diet, in all cases of cancer, should be mild and nourishing. A little animal food should be taken once a day, with eggs, and other light nutritious food. A little mild malt liquor, or white wine, will also be proper in most cases. Some professional men have advised a low diet in this disease; but, in my opinion, it is extremely injurious. Sir Astley Cooper protests strongly against it.

Change of air and scene, with daily exercise, proportioned to the strength, is always advisable.

An operation for the removal of ulcerated cancer in the breast is now never performed by men of judgment; and very rarely recommended by them in scirrhus, or unbroken cancer, except in the earliest stage, and before the occurrence of lancinating pain. After the commencement of pain, the use of the knife serves only to aggravate the patient's suffering, and accelerate her death. Persons at a distance from London will do well to note this, as it is no uncommon thing for a quite different advice to be given in the country, to the great injury and distress of the sufferer. Indeed, I am much disposed to question whether an operation ever succeeds in real cancer of the breast, except in the *very earliest* stage, in elderly people. Even then success is seldom witnessed. This opinion is given as the result of close attention for several years to the progress of cases in which an operation has been performed.

The subject of cancer in the womb is considered at length in the author's TREATISE ON THE DISEASES OF FEMALES. He has there

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also treated of the different tumours of the breast and womb, which simulate cancer.

In cancerous affections of the tongue powdered sulphate of copper is of admirable service, as described in my *Treatise on the Diseases of Females.*

CARBUNCLE

A carbuncle is a broad, flat, firm, burning tumour, in which the cellular structure takes on a sloughy or gangrenous state. It is so denominated from the redness and fiery heat of the inflammation. The first appearance it assumes is similar to a boil, and of a bluish colour, rising a little above the skin, having within it commonly a bloody serum.

It occurs mostly in elderly people, and in weakly depraved habits; and we frequently meet with it in those who have debilitated their frames by an excess of good living. It is a very common symptom in the plague.

It can be distinguished from other swellings by pressure, which causes a discharge in several parts of its surface.

TREATMENT—As this disorder usually appears only in bad and irritable constitutions, a treatment which soothes and supports the system is required, and as it easily assumes a gangrenous or mortified aspect, almost the same treatment will be necessary as in gangrene. Warm, aromatic fomentations, as No. 52, page 167, and emollient poultices of linseed meal and oil, are to be made use of. Stimulating lotions are likewise proper; and' one of the following may be employed with advantage.

Take of Spirit of turpentine, olive oil, of each . 3 ounces.
Mix for a lotion.

Take of Tincture of muriate of iron ..... 2 ounces;
Water ..... 14 ounces.
Mix.

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One of these is to be applied by laying over the tumour soft rags moistened with the lotion, and renew in them frequently.

A free incision should be made early through the whole length of the tumour, and as much of the contents be squeezed out as can possibly be done without giving great pain.

The constitutional treatment consists in the exhibition of bark, aromatic confection, opium, etc., as recommended for mortification; a fresh or salt warm bath at 94° twice a week; allowing a generous and nourishing diet, proportionate to the severity of the symptoms. The food should, however, be such as is very easy of digestion. Porter and wine, are very proper. See *Mortification.*

Take of Peruvian bark, 15 grains, or of sulphate of quinine ..... 2 grains or more;
Tincture of bark ..... 2 drachma;
Tincture of opium ..... 5 drops, or more;
Aromatic confection ..... 10 grains;
Decoction of bark ..... 1½ ounce.
Mix for a draught, to be taken three or four times a day.

A pill composed of from half a grain to a grain of opium, with three grains of James's powder, and half a grain of calomel, is a very useful night pill; and mild purgatives, such as No. 130A, page 209 are of essential service, and should never be neglected.

CATALEPSY OR TRANCE

Catalepsy is a total suspension of sensibility and voluntary motion, and for the most part, of mental power, the pulsation and breathing continuing, the muscles being flexible, and the body yielding to, and retaining any given position.

The complaint is rare, and many of its symptoms so singular, that some physicians, who have never witnessed an example of it, are disposed to regard it in every case as an imposture; but there is now no doubt of its being a real disease.

A highly nervous or irritable temperament is the chief predisposing cause; and the disease is capable of being excite by

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terror, or other violent emotions of the mind, and by various corporeal irritations, particularly those of the stomach, suppressed menstruation, repelled chronic eruptions and plethora.

TREATMENT—If it arises from fulness in the brain, a modes rate bleeding, with purging, will probably be the most effectual means of relief; but it is commonly a disease of nervous debility, when there is a necessary disturbance of the balance of the nervous system, and stimulants will. usually be found far more appropriate and serviceable, such as No. 82 or 84, page 184, or No. 102 or 103, page 196. Blisters to the head and breast, or between the shoulders, mustard poultices, and other rubefacients, *see* No. 46, page 163, to the extremities, together with injections into the rectum, may be useful. The body in the meanwhile should be kept warm, with a free influx of pure air; general friction may be often had recourse to, and a little brandy, ether, or ammonia may be introduced into the stomach, if possible. Fifteen drops of strong water of ammonia, in a wine-glassful of water is excellent.

After the paroxysm is over, the patient should enter upon, and steadily pursue, a plan for invigorating the whole constitution, and one of the tonics just recommended, or the stomach pills, No. 104 or 104A, or quinine, with change of air and scene, will be found some of the most powerful means of effecting this object. An entire change of air and scene is usually of the first importance.

CATARACT

The cataract is an opaque state of the *crystalline lens,* by which the rays of light are obstructed in their passage to the retina, or expansion of the optic nerve, on the bottom of the eye. There are three kinds of cataract, the lenticular, in which the opacity exists in the lens itself, and is confined to it; the capsular, where the opacity is confined to the capsule, or membrane of the lens; and the complicated, in which it is common to the lens and its capsule.

At the commencement, there is an indistinctness of vision, as if a cloud hung over the eyes, or the objects were enveloped in a mist; there is a sensation of a mote floating before the eye; it being,

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for the most part, a single mote and stationery; and the patient sees better in a weak than in a strong light. In the progress of the disease, an opacity becomes sensible, and gradually increases, until nearly a total loss of vision is produced; the crystalline lens by degrees changes from a state of transparency to a perfect white or grey colour; in some rare instances, it has been black, and also red; and in appearance resembles a pearl, or other extraneous body of alike colour, situated immediately behind the pupil

It frequently originates from causes we cannot trace; but it has often followed upon convulsions, chronic head-ache, syphilis, rheumatism, suppressed perspiration, and protracted inflammation of the eye. It is. most commonly met with after forty. If it suddenly forms from a severe injury, the lens frequently recovers its transparency without any operation being necessary.

TREATMENT–The power of medicine is generally very limited in this complaint, and the patient is, therefore, in the majority of instances, obliged to submit to a surgical operation for the recovery of sight. Yet recoveries have been witnessed after the employment of suitable remedial measures, and it is a question whether they would not often occur, if mole hope of success were commonly cherished by professional men. However this may be, a fair trial should in all cases be given to medical treatment, before resorting to an operation.

Perhaps the most powerful remedy here is the oxymuriate of mercury.

Take of Bi-chloride of mercury	2	grains;
Distilled water	3	ounces;
Rectified spirit of wine	3	drachms.

Mix.

The dose of this mixture is thirty drops, twice or thrice a day in water, gradually increased to a tea-spoonful. It is best taken on a full stomach, and when there is considerable general weakness, it may be advantageously combined with a drachm or two, of compound tincture of bark at each dose.

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The alterative pill, No. 98, page 191, has likewise been of service. And whether this, or the oxymuriate be tried, the compound extract or decoction of sarsaparilla will occasionally be found a valuable adjunct, especially when there is a deranged state of the general health, or signs of scrophula in the constitution.

The above remedies will be particularly indicated, if long-continued indolent inflammation has existed in the eyes.

Henbane has been highly extolled. From five to ten grains, or more, of the extract (*prepared in vacuo*) may be taken, two or three times a day, either alone, made into a pill, or with a small quantity of calomel, say, two grains, to a drachm of the extract of henbane.

Electricity, in the form of aura, or weak sparks, has been recommended. Mr. Ware, the well known oculists used to advise a drop or two of ether, to be rubbed into the eye, once or twice a day, occasionally rubbing the aye, over the lid, with the point of the finger dipped in mercurial liniment.

There is on record a remarkable instance of cataract, which was dispersed by general and persevering friction over the eye, the lid being closed. It occurred in the person of Admiral Henry, of Rolvelden, in Kent, who was himself the operator, and has published his own case in a shilling pamphlet.

When it is necessary to have recourse to the needle to remove the cataract from the axis of vision, it may be done by three different operations, each of which has its advocates. The first is by *extraction,* or the removal of the lens, by a semi-circular incision made through the transparent cornea: the second is that of *couching* or *depression of the lens*, in to the vitreous humour : the third is bby *puneturing the capsule* of the lens, so as to allow of the discharge of this crystalline body into the interior chamber of the eye. Mr. Ware, and Baron Wenzel, were attached to the first; Mr. Hey, of leds, and the distinguished Scarpa, practised the second; and Mr. Saunders, of the Eye Infirmary, adopted the last. Mr. Green considers Mr. Saunders's operation "greatly preferable to any other, in those cases which admit of it".—*Lancet,* vol. 1, p. 618. 1823-24. Mr. Tyrrell appears to prefer the operation of depression.—

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Lancet, vol. 2, p. 472. 1823-24. Each operation is supported and practised by men of great eminence, and it is extremely difficult to say which is the best. The operation of extraction is much more difficult and complicated than that of couching, and is more liable to be thwarted of sucess by subsequent inflammation;[1] but if it succeed, the recovery of sight is usually more perfect. The operation of puncturing the capsule is as simple as that of couching, and does not expose the patient to a repetition as the latter does. We may also remark, that if couching should not succeed in the first instance, it may be often repeated; whereas in the mode by extraction, if a cure be not accomplished in the first instance, the eye will be inevitably lost. It is reasonable, however, to suppose, that neither extraction, depression, or puncturing the capsule, is alike adapted to every case of cataract; but that the mode of operating ought always to be suited to the exiqeucies of the particular case. This is a point which has been too much overlooked by oculist. Beer, a very able and scientific German surgeon, whose treatise on diseases of the eyes has attracted great attention in this country, ridicules the idea of adhering exclusively to any one plan of operating; and whenever the question is put to him, what is his own plan? he answers that his custom is to operate in the manner which appears to him to be the best adapted to each particular case about which he is consulted.

We have been adverting above to the necessity for operating when both eyes are affected with this disease, but sometimes only one eye is affected, and the other is sound: in regard to the question, whether an operation ought to be done in this latter case, a difference of opinion prevails, though the majority of surgeons seem to answer in the affirmative, and I am disposed to think this is right. When there is a full-formed cataract in one eye, and vision is retained in the other, Mr. Travers thinks the postponement of the operation worng. "I am satisfied", says he, "that the cataractous eye, if it becomes the subject of an accidental inflammation, is strongly disposed to go into amaurosis, and further, that the retina[2] loses

1. Wenzel used to say that a man must poke out a hatful of eyes before he can hope to perform extraction with success.
2. The expansion of the optic nerve on the bottom of the eye.

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its vigour by the permanent exclusion of light. I speak from repeated observation of the fact". On the contrary, Mr. Lawrence is averse from operating under these circumstances.

The late Mr. Saunders was very successful in operating upon the eyes of infants and very young children, afflicted with cataract. His greatest success attended the operation between the ages of eighteen months and four years.

CHICKEN-POX

In the chicken-pox, after slight symptoms of fever, as lassitude, loss of sleep, wandering pains, loss of appetite, etc., an eruption appears; first on the back, consisting of small reddish pimples, much resembling the first appearance of small-pox. On the *second* day, the red pimples become small vesicles, containing a colourless fluid, and sometimes a yellowish transparent liquor. On the *third,* the vesicles arrive at their full maturity, and, in some instances, very much resemble the genuine small-pox. Soon after, the fluid escapes from the tender vesicle, and a thin scab is formed at the top of the pock, without pus ever being formed, as in the true small-pox. Generally before the *fifth* day the whole eruption disappears, and no cicatrix or mark is left behind.

It is entirely free from danger, unless the eruption be of the confluent kind, that is, the pimples being numerous and running into each other, when the danger is to be appreciated from the degree of violence of the concomitant fever.

Chicken-pox is more common now than before vaccination was introduced, when small-pox was more prevalent.

It is sufficiently *distinguished* from the small-pox by its fluid, except in a few anomalous cases, being limpid throughout; and by its concreting into crust as early as the third or fourth day from tire eruption: while in small-pox the fluid consists of pus (thick matter) as soon as formed, and does not concrete into crusts till the seventh day, and often much later.

The chicken-pox vesicle is full of watery serum on the top, on the *first* day of the eruption—a distinctive mark from small-pox.

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Dr. Willan has well described another characteristic circumstance—That small-pox pustules are, on the first and second day, small, *hard,* globular, red and painful; imparting the sensation when the finger is pressed over them, similar to that which one might conceive would be excited by the pressure of small round seeds under the skin; while in chicken-pox, almost every *vesicle* has, on the first day, a hard inflamed *margin;* but the sensation communicated to the finger is like that from a round seed flattened by pressure.

TREATMENT—In the ordinary course of this complaint, the symptoms are so slight as not to require the aid of medicine. Gentle purges are all that are in general necessary. If the shivering, sickness, head-ache and pains in the limbs, are severe, an active purge, as No. 27, page 155, should be administered, succeeded by some diluting drink; and the patient should be confined to a quiet, spacious, and well ventilated room, with a cool dress, till the febrile symptoms have left him.

CHILBLAINS

The Chilblain is a painful inflammatory swelling, of either a florid, deep purple, or leaden colour, appearing on the fingers, toes, heels, and other extreme parts of the body. The pain is sometimes intermitting and pungent, but the patient is more frequently annoyed by an obstinate itching, and sense of tingling. The part often swells, and ulceration not unfrequntly follows; in which case a simple separation of the skin is first observed, and below this there appears a foul, irregular, painful ulcer.

It is most frequently found in children, and older persons of relaxed fibres; and the common exciting cause is exposure to severe degrees of cold.

TREATMENT—A stimulant mode of treatment is the only one that will answer. When a person is much troubled with chilblains, I advise them to take a tonic, as steel or bark internally.

In the inflamed unbroken state, the topical application of a stimulating liniment, or lotion, is generally sufficient for a cure, if

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it be used early, and with perseverance, the part being defended, at the same time from the severity of the external air. The liniments, No. 41, 45 and 46, pages 162-63, are the most efficacious. The lotion, No. 68, page 173, is also useful. Sir Astley Cooper is said to have been partial to the following liniment, which I think an admirable application.

Take of Camphorated spirit of wine ..... 1 ounce;
Goulard's extract (pure)..... half an ounce.
Mix, and apply to the part.

In the ulcerated state, warm and irritating dressings will alone succeed in effecting a cure. Let the ulcer be dressed night and morning with one of the ointments, No. 94, 95 or 96, at page 190. If fungus flesh should appear, apply the citrine, or white precipitate ointment, as No. 89, page 188, till it has been removed, then dress with one of the former ointments till well. The following application is much esteemed in the ulcerated state.

Take of Honey ..... 4 ounces;
Turpentine ..... 4 ounces.
Mix these together, and then stir in a sufficient quantity of the finest wheat flour to give it the consistency of a cerate. Dress the part with it twice daily, in the usual way.

But there are very few applications–few indeed—which are more effectual than *strong brine.* It should be rubbed in two or three times a day; and is applicable both to broken and unbroken chilblains.

Many persons subject to chilblains might prevent their occurrence, or very much lessen their severity, if, upon the approach of winter, they were to defend the parts from external cold, by wearing leather socks, or a warm diachylon or Burgundy pitch plaster, spread upon leather. Dally friction with the flesh brush should also be resorted to, and the liniment, No. 45, be occasionally rubbed in, which will harden the skin, and effectually promote the circulation of the parts.

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No person troubled with chilblains ought ever to allow the employment of any means which tend to weaken either the part affected or the general system. Sometimes the chilblain will swell to a considerable size, and appear very red and inflamed, but this inflammation is dependent on weakness, and will never fail to be much increased by poultices, confinement, and every other measure that has not the effect of diving tone and strength to the local and general circulation. Under these circumstances I should order the patient a little quinine thrice daily.

CHOLERA MORBUS

By cholera is meant a vomiting and purging, which is often of an alarming character, especially in hot climates. This disease has been generally considered to be an inordinate secretion of bile of a vitiated quality; but it is now certain that those are the most alarming cases, in which the secretion of bile is wholly suppressed. It appears to me, that an intense irritation of the internal membrane of the stomach and small intestines, and a poisoned state of the blood, has much more to do in producing this complaint, than any diseased affection of the liver, gall ducts or any other organ.

The most frequent symptoms are nausea, pain and distention of the stomach and intestines; quickly succeeded by violent and frequent vomiting, and painful purging of thin and watery, or bilious, or other ill-conditioned fluids; agony of the intestines and abdomen; distressing thirst and heat, followed by cold sweats; a quick, small, and sometimes unequal pulse; great anxiety and extreme restlessness; excruciating spasms of the legs, arms, chest and abdomen; faintings, sometimes universal convulsions.

The attack of this complaint is generally sudden. In this country, the bowels are seized with griping pains, and the stools, which are at first thin and watery, as in common looseness, are passed frequently; then the stomach is attacked with sickness, discharges its contents, and rejects what is swallowed. In the course of a few hours, the matter vomited, as well as that discharged by stool, appears to be of a very bilious nature, and passes off both ways in

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considerable quantities; or it may be a thin, gruel-like fluid, devoid of smell. The griping pains in the intestines and stomach now become more severe, and are accompanied with spasmodic contractions both in the bowels and limbs.

In India, also, the disease commences nearly in the same manner, but there it often attacks with extreme violence, and proceeds with frightful rapidity. In Ceylon, where it often appears in its most concentrated states it is frequently called *Mort de Chien*,—the death of a dog,—which is nothing more than cholera appearing in its worst form.

The *essential* manifestations of *malignant* cholera, are sudden prostration of strength, collapsed countenance, blue lips and nails, shrunken fingers, the total failure of the animal heat, and the usual secretions, suspension of the pulse, stagnation of the venous circulation, and violent cramps in the legs and bowels. We see from this statement that vomiting and purging may be absent.

The most dangerous signs in the ordinary progress of the disease, are an icy coldness of the surface of the body, extending over the region of the heart and stomach; the skin under the nails becoming incurvated; the tongue icy cold; an universal colliquative sweat breaking forth, with a shrivelling of the palms of the hands and soles of the feet; an absence of vomiting and purging. The violence of the attack may destroy life in three, six, twelve or twenty-four hours or less, but this is not a frequent occurrence in Great Britain.[1]

1. In regard to the epidemic cholera lately raging on the Continent of Europe, it should be observed, that vomiting and purging were often amongst the least important symptoms, though the appearance of the fluid evacuated was highly characteristic. Rice-water strained, and allowed to settle down, is, when shaken up, the best type. The evacuations, both upwards and downwards, either soon ceased, or were easily repressed, while in many cases, and these the very worst, there were either none, or they were very trifling. It was the sudden paralysis and rapidly diminishing action of the heart, of the arteries, and of the organs of respiration, with thickening of the blood, the loss of the power to generate heat, that constituted the real danger of the first–the most fatal stage of the disease.
Dr. Barry says, "It is in the above state, particularly if there be violent spasm, that the *magisterium bismuthi (subnitrate of bismuth)* has been found so serviceable; assisted by cordials, and synapisms covering the whole belly and frictions.

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This disease is most frequently *caused,* in our own country, by suppressed perspiration, particularly by cold or damp applied to the feet; cold indigestible fruit, as unripe apples, cucumbers, melons, etc., violent purgatives; sudden fright; and it prevails most at the close of summer, and the beginning of autumn.

But it is to India that we are to look for cholera in its most exquisite forms, where it is frequently epidemic, and from its malignant character, often frightfully destructive of human life. The remote cause of the epidemic cholera of India and Russia seems to be a peculiar poisonous state of the atmosphere, and a specific contagion. Very many medical men do not at all admit its contagious nature, but the facts in proof of this are so many and so strong that many have changed their opinion, (and the present author is one of these), and consider it as decidedly contagious under favourable circumstances.

In respect to the causes which predispose to, or excite the disease in India, the most able practitioners agree that they are rapid atmospherical vicissitudes, in regard either to temperature or moisture; exposure of the body to currents of cold air, particularly the chill of the evening, after being heated by violent exercise of any kind, inducing debility or exhaustion; low marshy situations; flatulent or indigestible food, especially crude and watery vegetables, which compose a large proportion of the diet of the natives; and particularly that gradual undermining of the constitution, which arises in a condensed, dirty and ill-fed mass of population.

It has been usual with medical writers to consider severe affection of the liver, or of the bile ducts, or of the bowels, to be the immediate cause of cholera, (in other words, in what the disease essentially consists), but the present author is convinced that it is not so mach a liver or bowel complaint, as a disease of the BLOOD, caused by the inhalation of an atmospheric poison acting directly thereon.

When the vomiting and purging are absent, it is distinguished from colic by symptoms of intense anxiety, collapsed countenance, and severe cramps in the legs and muscles of the belly. The body

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becomes colder than an ordinary corpse, and often as pulseless, and the countenance more cadaverous and ghastly than in ordinary death; the eyes are sunk deep in their sockets, and the voice becomes a tremulous croak or whisper.

TREATMENT–In the slighter cases of cholera, the proper treatment consists in freely administering mild diluting drinks, as weak chicken broth, barley-water, toast-water, made with thoroughly toasted bread, and the like. Dr. Douglas strongly recommends toast-water made with toasted oat-bread boiled in the water, which he declares that he never knew rejected. These may likewise be exhibited by the rectum. After the stomach and bowels are thus cleared, the saline mixture in the act of effervescence should be given, (*see* No. 81, page 183); and repeated doses of laudanum must follow, to subdue the spasmodic action. Forty drops of laudanum may be given every hour, in the saline effervescing draught, or in spearmint water; or a grain and a half of opium be exhibited in a pill. Solid opium generally suits best in all cases of cholera.

A grain of calomel, combined with a grain of opium, is a powerful remedy, and may be given every two hours, or oftener, till the symptoms subside. Give also a dose of the astringent mixture, No. 80B, page 182, after every liquid motion. When the patient can retain nothing swallowed, opium should be rubbed into the pit of the stomach. *See* No. 39, page 161. If the extremities become cold and the pulse feeble, brandy and water, with ten drops of liquid ammonia in each draught, should also be given.

Dr. W. Ainslie has very highly extolled the efficacy of magnesia in cholera. Two drachms and a half, or three drachms, of sub-carbonate of magnesia, may be given in water, and repeated two or three times, if necessary. I think this may prove a very valuable remedy in the milder cases of cholera occurring in Great Britain, but we ought not to trust to it in malignant cholera.

In the cholera of India, however, and even in the severer description of cases in our own country, a more decisive and active plan of treatment is always necessary. *At once endeavour to check the diarrhoea,* by giving astringents and opium, as in No. 80B,

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page 182, and enjoining confinement to bed. One of the principal indications is to restore the vital functions, and to stimulate the heart into renewed action. For this purpose give the patient large draughts of *cold water,* and let half a drachm of bi-carbonate of potash be dissolved in one of the draughts of water, and repeated every three hours, or as often as either vomiting or purging occurs. This is calculated to produce a complete re-action in the system, and to restore animal heat. In Indian cholera the plan pursued with most success is that just advised, immediately afterwards administering calomel with opium, in very free doses of from eight to ten grains of the former, in a dose, with one or two grains of opium, or fifty or sixty drops of laudanum, and a scruple of columba powder, which is to be repeated, if necessary, every one, two or three hours, till the urgency of the symptoms subsides. To these should be added a liberal use of the most diffusible stimuli, as the sweet spirit of nitre, sesqui-carbonate of ammonia, (No. 79, page 181), tincture of cloves, camphor, hot arrack and water, mixed with camphor mixture, or warm punch. In many cases I believe cold arrack or cold brandy and water, will be more grateful to the patient,and more useful. The hot air or vapour bath is also necessary, and stimulating embrocations to the abdomen and limbs, or friction with hot flannels. *See* No. 41 or 46, pages 161, 163. In short, every means must be tried to determine to the surface of the body, and restore a natural warm perspiration.

When all medicines by the mouth have been ineffectual in allaying the irritability of the stomach and bowels, a hundred or a hundred and twenty drops of laudanum, should be given in an injection, mixed with warm starch or gruel. This has sometimes been successful.

The application of *dry* heat is, on the whole, much to be preferred to any other method of communicating heat to the body in cholera. For this purpose, dry salt or sand may be placed in a pan over the fire, and heated as hot as the skin will bear it, then put into pillow cases, or shirts tied at the ends; the cases should not be full, in order that they might be very pliant, and readily applied to every part of the surface.

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A writer on the epidemic cholera of India reports the effects of a fortunate blunder, in one instance, in the following terms: By mistake, twenty grains of calomel and sixty minims" (equal to one hundred and twenty drops) "of laudanum were given at an interval of less than half an hour. The patient was inclined to sleep; nothing more was done; and in two hours and a half he was as well as ever he was in his life".

The following directions for the cure of cholera, I regard as excellent. They were much approved by the Madras Medical Board, and are easily to be understood and practised. Give the patient the following draught

Take of Tincture of opium, sulphuric ether, of each 1 drachm;
Brandy or arrack ..... half an ounce;
Water ..... 1 ounce.
Mix.

If this be vomited, let it be repeated, every time, in ten minutes after the vomiting.[1] In half an hour after the vomiting has ceased, give a bolus of this prescription :

Take of Calomel ..... 12 grains;
Camphor ..... 3 grains;
Opium ..... 1 grain;
Oil of peppermint ..... 3 drops.
Make into a bolus.

If this bolus be vomited, it must be repeated in a similar manner each time, half an hour after the vomiting has ceased.

If the vomiting be violent, give an injection of one drachm and a half of laudanum in four ounces of barley-water : and let it be repeated as often as it is rejected. Half the quantity of this injection should also be administered after every liquid stool.

1. In case of vomiting, I think the addition of a scruple or half a drachm of columba powder an excellent practice. It often most materially assists in allaying vomiting.

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When no vomiting occurs at all, give the following draught and a bolus.

Take of Tincture of opium, sulphuric ether, of each half a drachm; Ipecacuanha wine		half an ounce;
Water	2	ounces.

Mix for a draught.

Take of Calomel	12	grains;
Extract of jalap	4	grains;
Camphor	3	grains;
Opium	1	grain;
Oil of peppermint	2	drops.

Make : into a bolus.

If these produce no effect, repeat the draught after every forty minutes.

In all cases rub the arms and legs with hot sand, and apply a blister or mustard poultice over the stomach, *immediately* after the first dose of medicine is given.

If the case be lingering and doubtful, after much medicine has been given, then omit all other medicines but this :

Take of Calomel	3	grains;
Ipecacuanha	2	grains;
Aloes	3	grains;
Opium		half a grain.

Make into a pill; one to be taken every hour.

Take of Barley-water	4	ounces;
Brandy, or arrack	3	drachms.

Mix to be taken every hour.

The patient, if thirsty, is to be frequently and freely supplied with cold water, or cold water containing a scruple of bi-carbonate of soda or potash in each half pint of water, as already recommended. Mr. Annesley states, that cold water, or cold water acidulated with nitric acid, was the general drink at the Madras

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hospital, and that it relieves a very distressing symptom, the burning sensation at the pit of the stomach. Placing a small piece of ice in the mouth often checks the sickness, and is a comfort to the patient.

A friend of mine, an old Indian officer, was given over in cholera; his pulse scarcely to be felt; but he was just able to whisper to his medical attendant that he should like some good port wine. It was given, and immediately he began to recover. He had found it a saving remedy several years before in similar circumstances.

If the patient survive there is sometimes a distressing sickness, with vomiting of green bilious matter. Dr. Barlow says, *(Practice of Medicine,* p. 702) " We have found the best remedy to be five grains of calcined magnesia in a table-spoonful of water every hour and a half or two hours. After the sickness has subsided, the chlorate of potass appears to act as a diuretic, and helps to restore the circulation".

Mr. Hope, a surgeon in the Navy, recommends the following medicine for the cure of cholera, and states that for thirty years it has succeeded in his practice in a very satisfactory way. I believe it to be an admirable remedy.

Take of Nitrous acid, (not nitric acid)	1	drachm;
Peppermint water or camphor mixture	1	ounce;
Tincture of opium	40	drops.

Mix them, and give a fourth part every two, three or four hours, in a cupful of thin gruel.

The belly should be covered with a succession of hot cloths, *dry;* bottles of hot water applied to the feet; and the patient should be allowed constant warm sippings of finely strained gruel, sago, or tapioca. No malt liquors can be permitted till restoration is fully established. When recovering, beef-tea, chicken broth, jellies, and sago or arrow-root with wine, may be given the patient.

The wearing of a large flannel belt or waistcoat is of the first importance as a preventive measure, and should be particularly enforced on the poor. It has been found a great preservative in India.

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The mode of treating this malady stated in the preceding pages is approved by the most experienced practitioners, but as the following presents some additional points, and is given by Dr. James Johnson, who had many opportunities of treating Indian cholera, I have much pleasure in inserting it in the present edition of this volume. Dr. Johnson says, (*Med. Chirurg. Rev.*, October, 1831,) "We have often been asked, what we ourselves would do, in the event of meeting with a case of malignant cholera", as now appearing on the continent of Europe. "The following contains the treatment which we would wish to be pursued in our own case".

> "The first step which we would advise, would be the placing the patient in a warm bed, where he is to be chafed with hot flannels all over the body, while a hot bath is preparing. The flannels might be impregnated with ardent spirits, and hot water, as soon as procured, substituted for the dry flannel. Meantime, we would administer three grains of opium and ten grains of calomel instantly, followed by moderate potations of warm brandy and water, while the skin is cold, and the circulation concentrated about the internal organs. We would be inclined to repeat three grains of calomel and one of opium every two or three hours, till reaction took place, and the the of the circulation flowed to the surface. As soon as the bath was ready we would place the patient in it, having put a good allowance of salt and mustard in the water. If by these means heat be restored to the skin, and the spasms and vomiting be allayed, the great danger is over, and the management of the feverish re-action requires but very moderate skill. The injection of fifty or one hundred drops of Battley's sedative, or common laudanum, in a small quantity of starch or gruel, into the rectum, might be beneficial. These we conceive, are the main indications of treatment; and if they fail, we apprehend that most of the complicated machinery of practical medicine, recommended by some, more from speculation than experience, will be found to share the same fate".

I am glad to see that the Austrian Government, in their official regulations, issued during the period of the epidemic in 1832, called upon all the clergy to "inspire the people with confidence in Divine Providence"; and a late writer on this disease (Mr. Annesley) has

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the following remarks in point : "There is a moral courage possessed by some individuals, who are even the weakest, perhaps, as respects physical powers which resists more efficiently the causes of intertropical diseases, than the bodily powers of the strongest, who are not similarly endowed". The highest-style of this courage, which is often so acknowledged a safeguard in pestilential diseases, and which with certainty softens all the calamities of life is not that of the mind, but of the *heart:* it is not a natural courage, but that which is drawn directly from the skies, and inspired by the vital principles of pure christianity and faith in God.

COLD AND COUGH

A cold in the head or chest, is a slight inflammation of the membrane lining the back part of the mouth, and extending to the terminations of the windpipe, (called *bronchia),* and the nose being attended with a stuffing of the nostrils, sneezing, and for the most part, a mucous expectoration, or discharge from the nose.

Its symptoms are well known to be feverishness; weight and pain in the head; oppression of the chest, and impeded respiration; sense of fulness and stopping of the nose; watery inflamed eyes; *cold* shiverings, succeeded by transient flushes of heat; soreness of the fauces and windpipe; cough; pains in the chest; and increased secretion of mucus from the parts affected.

There are *two species* of this complaint, *common cough* or *cold*; and the *epidemic cough,* or *influenza.* The usual cause of the first is cold applied to the body; of the second, contagion, or rather, atmospheric influence.

The epidemic cough or influenza, differs from common cold in the suddenness of its attack, the severity of its symptoms, and very generally in the rapidity of its transition, as well as in the nature of its cause. The middle aged, the strong and the robust, are the soonest affected by it, and suffer most severely, while the young and the old are less susceptible of its influence. The fever is often strikingly depressive. Indeed the influenza may be considered as a catarrhal fever, accompanied with, and followed by, extraordinary

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depression of the nervous energy for several weeks after the fever has ceased.

TREATMENT—*In the common cold,* a little domestic repose in a very moderately warm atmosphere, diluting drinks, of a temperature not higher than lukewarm, and abstinence from animal food and fermented liquors, with a sudorific posset of treacle and milk, or some warm gruel, or the draught No. 35A, page 158, at night, is usually sufficient to carry off the complaint. If the cold be rather severe, four grains of James's powder alone, taken at bed time, is a useful remedy and a little aperient medicine, as No. 73 or 74, page 176, should be taken in the morning. And the draught No. 35A, if taken two or three times a day, will be found very soothing and refreshing. If the cough be troublesome at night, four grains of compound powder of ipecacuanha in a pill, taken on going to bed, may be advisable, or a dose of No. 78B, page 180.

Dr. Watson's advice is judicious, with the exception of the patient's remaining in bed, which I do not recommend. He says, (*Prac. of Physic*, vol. ii. p. 27).

> Every man, in regard to a cold, thinks himself qualified to be his own doctor. But. if you are consulted, keep your patient in the house, or even in bed; let him live upon slops; give him a gentle apperient, and then some of those medicines which are esteemed to be diaphoretic small doses of James's powder; three drachms of the solution of acetate of ammonia, with a drachm of the sweet spirit of nitre, and an ounce of camphor; or a saline draught (as No. 35A, page 158), with an excess of alkali and a few grains of nitre, or a little antimonial wine; give some such gose three times a day; and let him take four grains of Dover's powder, and put his feet and legs into a warm bath just before he goes to bed. In this way you may conduce to his recovery; and he may be simple enough to suppose that yon have *cured* him".

Should the cough be of a severer description, with extreme oppression of the chest, difficulty of breathing, and considerable fever, it may be necessary to let blood to the extent of six or eight ounces, and the mixture No. 78B, page 180, must be taken; but then the complaint is bronchitis, to which I refer the reader.

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It is not a correct practice, after a cold is caught, to make the room the person sits in much warmer than usual, to increase the quantity of bed clothes, wrap up in flannel, and drink a large quantity of hot tea, gruel, or other slops, because it will inevitably increase the feverishness present, and, in the majority of instances, prolong rather than lessen the duration of the cold. It is well known that confining inoculated persons in warm rooms, will make their small pox more violent, by augmenting the general heat and fever, and it is for the same reason that a similar practice, in the present complaint, is attended with analogous results, a cold being in reality a slight fever. Indeed, some professional men recommend a reduced atmosphere, and frequent draughts of cold fluids, as the most efficacious remedies for a recent cold, and when the patient's habit is full and plethoric, I believe it will be found the best treatment, at least in the commencement. In some parts of England, among the lower orders of the people, a large glass or two of cold spring water, taken going to bed, is found to be a successful remedy.

A cold is so common a complaint in our variable climate, and becomes so frequently the parent of more formidable maladies, that the subject of *prevention* is one of considerable moment; and I shall consequently make a few observations respecting it, which, if attended to, cannot fail to be extremely useful to all persons, and more particularly to those who are liable to suffer severely from this disorder.

Colds are sometimes produced in the following manner when a person in cold weather goes into the open air, every time he draws in his breath the cold air passes through his nostrils and windpipe into the lungs, and, consequently, diminishes the heat of these parts. As long as the person continues in the cold air, he feels no bad effects from it; but as soon as he returns home, he approaches the fire to warm himself, and very often takes some warm and comfortable drink to keep out *the cold,* as it is said. The inevitable consequence is, that he will first perceive a glow within his nostrils and breast, as well as over the whole surface of the body. Soon afterwards, a disagreeable dryness and huskiness will be felt in the nostrils and breast. By and by, a short, dry, tickling cough comes on. He feels a shivering, which makes him draw nearer to the fire,

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but all to no purpose; the more he tries to heat himself the more he becomes chilled. All the mischief is here caused by the violent action of the heat.

Such being a frequent cause of cold, the following rules for avoiding the complaint may be adopted with great advantage.

When you come out of a very cold atmosphere, you should not at first go into a room that has a fire in it, or, if you cannot avoid that, you should keep for a considerable time at as great a distance as possible, and above all, refrain from taking warm or strong liquors when you are cold. This rule is founded upon the same principle as the treatment of any part of the body when frost-bitten. If it were brought to the fire, it would soon mortify, whereas, if rubbed with snow, no bad cnsequences follow from it. Hence, if the following rule were strictly observed, *when the whole body, or any part of it is chilled, bring it to its natural feeling and warmth by degrees,* the frequent colds we experience in winter, would, in a great measure, be prevented.

Some persons labour under what seems like a cold in the head for weeks or months, but this is merely a symptom of general derangement of the system, and must be treated accordingly. It requires the use of the alterative pill, No. 98, page 191, every other night, and a stomachic pill, No. 102 or 104, page 197, or bark and ammonia, No. 84B, page 185, twice a day, together with cold sponging every morning on rising, and a rather generous diet, with plenty of exercise in the open air.

In the INFLUENZA, bleeding is never required, notwithstanding the violence with which this disease often makes its assault, and from the debility so soon induced, should be avoided. If urgent pleuritic pains are present, it will be best to trust to dry cupping simply, a strong liniment, No. 46, page 163, and the mixture, No. 78B, page 180. The most successful treatment is a sustaining one, and consists in repose, diluting drinks, and the employment of the usual means, above noticed, to obtain and preserve a gentle perspiration, the bowels being kept free from confinement. If the chest be much oppressed, an emetic, or a mustard poultice will afford the best relief; and if the cough be troublesome, and the.

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breathing laborious, and the mixture, No. 78B, does not relieve it, then give the following :—

Take of Ipecacuanha, in powder	4	grains;
Oxymel of squills	2	drachms;
Sweet spirit of nitre	1	drachm;
Spearmint water	2½	ounces;
Syrup of orange peel	1½	drachm.

Mix, and take a table-spoonful four or five times in the twenty four hours.

Unless the inflammatory symptoms run very high, the diet should be nourishing throughout, though mild.

In 1833, an epidemic influenza raged throughout Europe, and it is supposed that in most of the largest cities in this quarter of the globe, almost one-half of the inhabitants were attacked by it. Blood-letting and all depletory measures were found hurtful. But the epidemic influenza of 1837 was far more general, severe and fatal than that of 1833; in all these respects it probably exceeded any epidemic with which Great Britain has been visited within the memory of man. In this awful visitation, with which it pleased Almighty God to visit our land, small blood-lettings and all lowering measures did harm, even in plethoric habits. The most successful treatment in severe influenza is, I believe, that which consists chiefly in the administration of the ammonia mixture, No. 78B, or 78D, page 181, taking care to observe a strict mild diet, and to avoid exposure to the easterly winds. In these mixtures the tartar emetic unloads the chest, keeps the bronchia and skin free, abates fever, and regulates the bowels, while the ammonia is sustaining. They are admirable remedies. A dose of the cordial mixture, No. 79, page 181, may also be taken twice at least in the twenty-four hours. The draught, No. 35A, page 158, now and then is also excellent, should any thing more of a sustaining nature be required. For the hiccup, which now and then occurs with alarming severity in influenza, perhaps the best means of relief is a mustard poultice to the pit of the stomach, and ten drops of liquid ammonia internally in water.

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The influenza frequently leaves behind a good deal of weakness, and a troublesome cough. The debility is to be removed by a free use of decoction of bark and ammonia, No. 84B, page 185, gentle exercise, cold bathing, a nutritious diet, and especially by change of air. For the cough, small doses of tartar emetic, or No. 76A, page 179, or No. 78A, will be found the most beneficial.

Some of the most intractable diseases originate in neglected colds; and it is, therefore, highly necessary that this complaint should at all times be attended to, and removed as quickly as possible. It is a vulgar saying, "feed a cold, and starve a fever", but it is not correct; the proper treatment has been pointed out. The weakly and delicate, who are subject to frequent colds, should endeavour by diet, regimen, daily sponging with cold water, and medicine, to invigorate the general habit, remembering that the most effectual way of guarding against cold, is by rendering themselves superior to its influence; which most people may do by constant exposure to the air, and cold bathing, with active exercise, and avoiding enervating indulgencies within doors. It is a very pernicious practice to sleep and dress in a room that has a fire in it, even in winter. The smoke, dust, and heat arising from burning fuel in a bed-room, are highly injurious to health, more especially to the health of the weakly.

Strong and robust persons, liable to frequent colds, will find temperance, plenty of cold water, and attention to the preceding rules, a certain preventive. To all, the daily use of the flesh-brush to the throat, neck and breast, and sponging the whole body with cold water every morning on first getting out of bed, will prove of great service in rendering the party less susceptible to the action of cold. These are means highly deserving of the confidence and attention of the delicate who are much troubled with colds and hoarseness. Sir Astley Cooper attributed his freedom from colds, in a great measure, to the constant practice of sponging the body daily with cold water. He remarks,

> "The methods by which preserve my own health, are temperance, early rising, and sponging the body every morning with cold water,

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immediately after getting out of bed, a practice which I have adopted for thirty years; and though I go from the hot theatre into the squares of the Hospital, in the severest winter nights, with merely silk stockings on my legs, yet I scarcely ever have a cold. Should it happen that I feel indisposed, my never failing remedy is one grain of calomel combined with four grains of cathartic extract, which I take at night with a basin of hot tea about two hours before I rise the following morning, in order to excite a free perspiration, and my indisposition soon subsides."—*Surgical Lect. No. IV.*

Dr. Heberden says, that a patient of his was cured of an habitual cold in the head whilst taking a full dose of Peruvian bark, two or three times a day, for the relief of some other complaint; a circumstance proving the advantage of a suitable tonic in an habitual cold.

COLIC

Colic is a griping pain of the bowels, chiefly about the navel, and often accompanied with a painful distension of the whole of the lower region of the bowels, with vomiting, costiveness, and spasmodic contraction of the muscles of the abdomen.

There are several varieties of this disease, the principal of which are, the stercoraceous colic or iliac passion; the Devonshire or painter's colic; the flatulent colic and the constipative colic. The first is chiefly remarkable, for the vomiting of the faces, or of substances injected by the anus; the second for its attacking painters, plumbers, and other persons exposed to the poison of lead, and being frequently followed by palsy of the wrists and arms; the third, from the existing symptoms of great flatulence, and the relief following the expulsion of wind; and the last, for the obstinate constipation and great tension present, with little flatulence. A remarkable symptom in *lead colic* is a bluish or purplish line along the edges of the gums.

The complaint is produced by various *causes,* such as crude, indigestible fruits; long continued costiveness; cold beverages on a heated stomach; catching cold in the feet or bowels; violent

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purgatives; worms; calculous, or other concretions formed in the intestines; transferred gout or rheumatism. The cause of the painter's colic is invariably the poison of lead received into the system, from exposure to its fumes, or from taking it internally, as is sometimes done by persons who drink impure cyder or wine.

The colic is to be *distinguished* from inflammation by the spasmodic contraction of the muscles of the abdomen; by the absence or trifling degree of fever; by the pulse being little affected; and by the ease with which the patient submits to pressure, which, indeed, frequently affords relief. Severe colic, however, is sometimes, in its progress, combined with inflam-mation, which will be known by the usual symptoms noticed under that head.

TREATMENT—The indications are to relax the spasm, and to evacuate the bowels; and the most powerful remedies are the warm bath,—warm fomentations,—copious warm clysters, opium, either by the mouth or in clysters,—stimulants to the belly, as turpentine, or volatile alkali rubbed on it;—purgatives,—aromatic stimulants and antispasmodics, internally. The patient may be directly plunged into a warm bath at 98 or 100 degrees, or warm fomentations be applied over the bowels, two table-spoonfuls of castor oil being likewise administered, or one of the purgatives marked No. 27 or 28, pages 155-56. An ounce of castor oil, and a drachm of spirits of turpentine, mixed together, is often a valuable purgative. Frequently it will be advisable to give two or three of the pills No. 97, and to assist their operation by occasional doses of No. 73, page 176. A copious clyster, as No. 8, page 146, is sometimes a valuable remedy; and if the first be insufficient, a second or third may be injected without delay. Often the administration of opium is necessary, and one of the best forms is an injection, a hundred and twenty drops of laudanum may be mixed with four ounces of warm olive oil for this purpose. If the colic continues obstinate, notwithstanding the employment of these means, give a grain of calomel and a grain of opium every three hours; and in case of great irritation of the stomach, with frequent vomiting, the effervescing saline draught, No. 24, page 153, may be taken, with or without ten drops of laudanum or a little brandy.

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The colic which is so frequent in the West Indies may be successfully treated in the same way, but here a five or six grain dose of calomel is often of much service, if administered early.

As an outline of the treatment called for according to the particular *causes* of the complaint, we may say, that colic proceeding from cold acid beverages will require antacids, combined with aromatics and anodynes, as No. 79, page 181, to which mixture two drachms of tincture of henbane, or thirty drops of laudanum, may be added; this should be followed by the exhibition of the clyster No. 8, page 146. If it has been caused by acid, indigestible fruit or food, an emetic of thirty grains of ipecacuanha powder in brandy and water, should be the first thing taken, and after it has ceased to operate, the mixture No. 79 may be taken as just advised, and followed by a warm purgative, as No. 25, page 154. If the colic has been produced by eating fish, Cayenne pepper is an almost unfailing antidote. In the flatulent colic, a small quantity of brandy, or an aromatic cordial, as a drachm of aromatic confection, with a table-spoonful of tincture of rhubarb, and a little peppermint water, is often effectual. But here the assafoetida injection is still more useful, and sometimes acts like a charm. *See* No. 10, page 147.

When all the above means fail, cold applications have been resorted to with success, especially the dashing of cold water upon the thighs and abdomen, or the application of ice or snow.

Whenever inflammation supervenes, or a decided tendency towards it, evidenced by shivering or a full pulse, blood should be drawn freely from the arm, whatever may be the cause of the colic.

In the painter's colic, the use of large doses of opium should be the first thing resorted to, as experience has proved it to be the most powerful means of relieving the spasmodic pain in this species of colic, and of preparing the way for the effectual operation of subsequent medicines. The patient should therefore take immediately sixty drops of laudanum in a little cinnamon water, which may be repeated in the course of two hours, if relief be not obtained. When the spasm begins to relax, purgative medicines should be administered, and castor oil, in free closes, is one of the

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best purgatives that can be employed. If the pain returns, opium should again be exhi bited, and afterwards opening medicine, and so on till the disease is entirely overcome. Should the complaint be particularly obstinate, the opium may be combined with calomel, in the following proportions, purgatives being still occasionally interposed :

Take of Calomel ..... 6 grains;
Purified opinm ..... 12 grains;
Conserve of roses, a sufficient quantity to make the whole into six pills.
One to he taken three or four times in the twenty-four hours.

The poison of lead frequently occasions a palsied state of the wrists and arms, for the removal of which the nitrate of silver, and iodide of potassium, seem to be the most efficacious medicines. The nitrate of silver may be given in the dose of one or two grains, made into pills with a little bread crumb and mucilage, and repeated two or three times a day. This has performed cures in cases of considerable standing.

Persons subject to colic should be attentive to their diet, and to the regulation of the bowels, and particularly avoid cold, indigestible, or undressed vegetables. Painters, plumbers, and others exposed to the fumes of lead, should observe the greatest cleanliness, and always wash their hands and face before taking a meal, and, if possible, throw off their dirty clothes after leaving work. They should mix a little diluted sulphuric acid with their beer or other drink.

PULMONARY CONSUMPTION

Before I enter on the subject of consumption, it may be of service to many to remark, that it is common to confound diseases of the lungs and heart. Disease of the lungs is indeed, very common, but these maladies are not so frequent as is generally supposed, many of the cases, especially where cough is present, being rather diseases of the heart than the lungs.

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Pulmonary consumption is a disease of the blood, a disorder specially affecting the nutritive functions. It is generally regarded as a wasting dependent upon disease of the lungs. It consists in a general emaciation of the body, with debility and cough, for the most part attended with hectic fever, and frequently with purulent expectoration. Most physicians call that disease alone pulmonary consumption, or *phthisis pulmonalis,* which is the consequence of the development in the lungs of a particular species of production or deposit, called *tubercle.*

This is a disease of the first importance, both on account of its frequency and fatality. It has been pretty accurately calculated to carry off prematurely one-fourth of the inhabitants of Europe; and it is supposed that the annual victims to its ravages in Great Britain exceed seventy thousand.

Dr. C.J.B. Williams has the following valuable remarks on the nature of this disease, in his *Lectures before the College of Physicians in* 1862.

> "The more fully we recognise the relations of the disease to the general economy, and the less it is treated as a mere local affection, the more likely are we to make progress."
>
> "There seems to me to be two prominent varieties of phthisis. In the one, as the natural change of tissue goes on, this degenerate material (tubercle) is laid down in its place. Tubercle occurs in the blood, and the blood-cells themselves may be so altered. Thus tubercle may occur as a change of ordinary nutrition; but if the nutrition be altered by inflammation and congestion, an imperfectly formed material being effused as the consequence of the condition of the blood,—that material not being capable of forming proper membrane, nor yet of being absorbed as healthy lymph would be,—it remains a source of irritation, and may undergo further tubercular degeneration. These views, which I first expressed now thirty years ago, have rather been confirmed than altered by the lapse of time and the concurrent progress of science."

The earliest *symptoms* of consumption are often insidious and obscure. The patient is sensible of a deficient appetite, and an

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unusual languor, perhaps complains of indigestion, and breathes with less freedom than formerly, so that his respirations are shorter and increased in number. He coughs occasionally, but does not complain of its being troublesome, and rarely expectorates at the same time; yet if he make a deep inspiration, he is sensible of slight uneasiness in a particular part of the chest. These symptoms gradually increase, and at length the pulse is found quicker than usual, particularly towards the evening; a more than ordinary perspiration may take place in the course of the night; and if the sleep be not disturbed by coughing, a considerable fit of coughing takes place in the morning, and the patient feels relaxed and enfeebled. This may be said to form the first stage of the disease.

The cough increases in frequency, and, from being dry, is accompanied with a purulent mucus, varying, according to the peculiar modification of the disease, from a watery whey-like sanies, occasionally tinted with blood, to an expectoration of nearly genuine pus; and the malady is now decidedly established. The fluid spit out may be livid, deep-black, light-brown, light-green, or yellowish white; flattened or round; hard or soft; fetid or without smell. In many cases it is very scanty, and it may happen that there is no expectoration at all; for in the apostematious species, the sufferer has now and then died before the abscess has broken. Commonly, what is called a vomica, or abscess in the lungs, is the result of the softening and bursting of a mass of tubercles. The uneasiness in the chest, only perceived at first on making a deep inspiration, is now permanent and attended with a sense of weight; the hectic fever has assumed its full character; and the patient can only lie-with comfort on one side. The strength now fails apace; the pulse varies from about a hundred to hundred and twenty or thirty; the teeth increase in transparency, and the white of the eye is pearly-white; the fingers are shrunk, except at the joints, which become prominent; the nails are bent for want of support, and become painful; the nose is sharp; the cheeks are red; the eyes sunk, but bright; the countenance as if smiling; the spine projects; and the shoulder blades stand out like the wings of birds.

The local pains in this disease are uncertain; most of the patients

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have some pain; many have none at all, and some have very acute pain. In general, the pains in the chest in cases of phthisis are owing to slight chronic pleurisy, that is, chronic inflammation of the membrane lining the chest.

The *third stage* is melancholy and distressing. It commences with a depressing and colliquative looseness; but till this period, and occasionally, indeed, through it, the patient supports his spirits, and flatters himself with ultimate recovery. The voice becomes hoarse; the mouth beset with small white pustules, or the throat ulcerated. Frequently dropsy, in various forms, now makes its approach; a languid delirium sometimes occurs; but, in general, the faculties are entire, and the senses acute; until the extremities grow cold, and the closing scene arrives.

Though this is the common progress and termination of the disease, yet it varies considerably in the character and combination of its symptoms. We may clearly distinguish : 1. *Regular manifest consumption;* 2. *Irregular manifest consumption;* 3. *Latent consumption;* 4. *Acute consumption;* and 5. *Chronic consumption.*

The *first* is that which observes the regular course described above; the *second,* includes those cases of phthisis, in which the disease seems to begin in some other organ besides the lungs. For example, it is by no means uncommon to find the local and general systems of consumption preceded by chronic diarrhoea or looseness of long standing. Here often ulcers exist in the intestines, and small miliary tubercles. 3. *Latent* consumption is that where the symptoms are masked for a long time, as by nervous disorder, habitual indigestion, or common cough.[1] 4. *Acute* phthisis are those cases

1. These are cases in which previous disorder of some kind has existed for a long time, and which has terminated in consumption, from the previous disorder not having been cured. A case of this description is the following : "A person for several years hypochondriacal, but who still preserved his strength and plumpness, (a pretty sure sign that he would have recovered his health, *Deo volente,* had he used the proper means), was suddenly attacked with an acute catarrh, which was succeeded after five days by an expectoration of *pus* and mucus, mixed with a little blood. These symptoms subsided in the course of a few days; but after six months they were succeeded by symptoms of a decided phthisis, which carried the patient off in six weeks".

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which unfold themselves all at once, with acute fever, emaciation; and other symptoms of such severity as to carry off the patient sometimes as early as the end of six weeks, or even a month. 5. *Chronic* phthisis includes those examples which last five or six years, or even longer.

The chief predisposing *causes* appertain to a peculiarity of constitution, marked by a long neck, prominent shoulders, narrow chest, long slender fingers, and symptoms of constitutional irritability that is easily affected by external agents. The occasional causes are very numerous, as frequent and sudden changes of temperature, or imprudent exposure of the body to cold; the dust to which certain artificers are exposed, as needle-pointers, stone-cutters, millers, etc.; over action in speaking, singing, or playing on a wind instrument; the irritation of various other diseases, as measles, small pox, hooping cough asthma, or syphilis; the sudden suppression of a cutaneous disease, or of any habitual discharge; the irritation of a too rapid growth of the body; and the operation of the depressing passions. The disease may also arise from the lodgement of any extraneous substance in the gullet, or in the windpipe; from profuse evacuations; and from continuing to suckle too long under a debilitated state.

Consumption is often said to be caused by spitting of blood; it certainly not unfrequently follows the discharge of blood called *haemoptysis,* but very generally tubercles in the lungs precede or are co-existent with that condition of those organs which give rise to haemoptysis, and we ought consequently to say, that the spitting of blood is rather a sign or symptom of consumption than the cause of it. The particular consumptive constitution most liable to haemoptysis is distinguished by the brilliant whiteness of the skin, the bright redness of the cheeks, the narrowness of the chest, the projecting or winged configuration of the shoulders, and the slenderness of the limbs and trunk.

A French physician (Laennec) who had an uncommon experience in consumption says, "it has appeared to me that almost all those who become phthisical, without being constitutionally predisposed to the disease, might attribute the origin of their

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complaint to grief, either very deep or of long continuance".[1]

The species of consumption to which artificers are liable who are exposed to much dust, is the catarrhal, called *bronchitis.*

Consumption may be distinguished from *bronchitis* by some expectoration always attending the cough of *bronchitis,* while the cough of consumption is often, for a long while, dry. Bronchitis is not accompanied by spitting of blood. The pain that occurs in bronchitis is felt beneath the breast bone; in consumption pain is most frequently felt in the sides, and between the shoulders.

1. Some people seem to doubt whether consumption, when truly formed, is ever cured, but this is to disregard the evidence of our senses, (which certain persons are not unwilling to do) in a matter of fact. They may with as much propriety deny that indigestion, when fully formed, is curable. Notwithstanding the uncommon fatality of consumption, do we not happily see continually cases recover which had been by every one thought desperate, and that after hectic fever was clearly established ? Can any man long in extensive practice deny this, without disputing the reality of a matter of fact? I think not. Supposing that ulceration has taken place in the lungs, why should it not heal there, under efficient treatment, as well as elsewhere? No good reason can be given why it should not; and, indeed, we know it may. The following sentiment of Mr. Abernethy on this point, may be acceptable to many of my readers. It is oddly expressed, and embraces only a limited view of the subject, but is, nevertheless, valuable. He says, "Can consumption be cured? bless me, that's a question which a man who had lived in a dissecting room would laugh at: how many people do you examine who have lungs tubercular, which are otherwise sound. What is consumption? It is (ulcerated) tubercles of the lungs; then, if those tubercles were healed, and the longs otherwise sound, the patient must get better".—*Anatomical Lectures.*
M. Laennec has described what he found on the dissection of the body of a woman, aged 52, who died from disease in the chest after she had been "many years cured of consumption". She had many years suffered from disease in the chest, but the dissection proved that an ulcer which she formerly had been perfectly healed. "In the upper and posterior part of the right lung, (he says, *Treatise on Diseases of the Chest,* page 171), there was found an excavation of an oval shape, about two inches in length, above an inch broad in the centre, and the sixth of an inch deep. The inner surface of this cavity was smooth and polished, though somewhat irregular; it was white, but interspersed with red specks, arising from numerous small vessels. This cyst was entirely empty." M. Laennec's work contains several cases equally conclusive, and in M. Andral's *Clinic. Medical,* vol. iii. page 382, eight or ten examples of cicatrization of the lungs after tubercles are given. Laennec says, page 305, " I am convinced, from a great number of facts, that, in some cases, consumption is curable in the latter stages, that is, *after* the softening of the tubercles and the formation of an ulcerous excavation."

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The more readily oil is saponified, or formed into an emulsion in the stomach, the more easily it is digested and the more nourishing it proves to the body.

Tubercular consumption, as already remarked, arises from the deposition of tubercles in the air cells, or cell walls, of the lungs, generally commencing in the apex of the lung. Tubercles are small, hard bodies, or cheese-like, either grey, semi-transparent, or of a crude yellow colour, and they are mostly the product of a mild and chronic form of inflammation in the lungs. There are three stages of this disease: first, that of *deposition;* secondly, that of *softening;* and lastly, that of ulceration. The symptoms of *deposition* are cough, and expectoration of a frothy or mucilaginous kind,—sometimes streaked with blood—slight pain in the chest, frequent and small pulse, loss of appetite, and some loss of flesh, and frequently in females a sudden stoppage of their usual monthly relief. A slight flattening is observed under the collar bones, and a diminished expansion of the chest. The symptoms of *softening* are those of considerable suppuration and hectic fever; pearly whiteness of the eyes, red tongue, irregular bowels nocturnal perspiration, hoarseness of voice, and the expectoration of a pus-like mucus. The cough is now more troublesome than it was. There is an increased flattening of the chest, and dulness on percussion. In the last stage of *excavation,* all the symptoms are aggravated; the hectic fever is severe, and the emaciation usually extreme, the pulse extremely small and frequent, there are night sweats and diarrhoea, the cheeks hollow, and the eyes sunken, with a clammy perspiration. Spitting of blood often occurs after softening, and then from the rupture of some vessel opened by ulceration. In the progress of the disease, stitch or pain in the side *(pleuritis)* is frequently present, and at an advanced period ulceration of the larynx.

Tuberculous matter generally occupies chiefly the upper part of the upper lobes of the lungs, but it may remain quiet for a long time, and if no low inflammation supervenes, the patient may be but little, if at all inconvenienced, by it. If the patient can be invigorated,—if the nourishment of the whole system can be increased, he will generally be placed in a state of security. But

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when, from any cause, an inflamed condition occurs, then a sort of suppuration takes place; the tubercles become soft, break down, and are ultimately expelled by coughing through the bronchia, windpipe, and mouth. The cavities left in the lung after this process of expulsion are called excavations, or *vomicae*. These excavations of course vary in size; they may be as small as a pea, or as large as a man's fist. The lung tissue around such a cavity is condensed and solidified, and if the cavity is single, and it becomes completely emptied of tuberculous matter, it may gradually contract, become obliterated, and the patient recover. Consequently it is a grand object of treatment to promote such an emptying and contraction of the excavation, and to prevent any fresh deposition elsewhere of tuberculous matter.

Dr. T. K. Chambers's remarks on this point are very instructive. He says *(On the Treatment of Consumption,* published in the *Medical Circular,* 1862) :—

> "What the patient has to fear, is not the remaining of the tubercls in the body, but its increase. That which is once there has done its mischief, its path of ruin is past, the portion of lung which it has occupied is gone for ever, and cannot grow again any more than an amputated leg. The *post-mortem* examination of consumptives show almost always the cause of death to be a fresh formation of tubercle at no distant period, which has abridged the remaining organ to a degree inconsistent with life. A single deposit of tubercle to a moderate extent can almost always be recovered from. It is the continuous repetition of the process which is so fatal. I cannot, therefore, too strongly impress upon you, that not so much the tubercle as the tendency to form tubercle, not the morbid matter but the diathesis, is that which should occupy your thoughts."
>
> "When tubercle first takes its place in the pulmonary tissue, the lung feels a good deal inconvenienced by its presence; there is cough, inflammation round it, condensation of the neighbouring substance and from the unaccustomed loss of part of the respiratory function, there is general ill-health. These consequences are directly proportioned to the quantity of lung spoilt. They may be so severe as to cause death by what is called "tuberculous pneumonia", or by "galloping consumption", when a large extent is very quickly

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rendered unserviceable. Or, when the injury is slower and slighter, they may be so insignificant as not to have attracted notice at all. The other day, in a patient who died of chores dependent on a tubercle in the spinal cord, you saw scattered tubercles in both lungs which had caused no symptoms at all during life, though they probably had been there longer than the tubercle in the less usual situation which proved fatal. And very often in persons killed by accident, apparently the prime of activity and with no history of any serious illness, you find crude tubercles, scars of former tubercles and the chalk-like *debris* of tubercular matter. And, to come to more agreeable evidence, you find people with very large quantities of tubercle in the lungs so large as to have proved almost fatal, who yet recover to a great extend from the mischief which it has caused. When once the lung has got over the shock of illness produced by the presence of the first crop, the health recovers, and the patient (though imperfect in body of course), has only to fear a fresh development. It is astonishing what enormous ravages may be made in the lung, and yet with the help of what remains people recover the health that has been lost. I dare say you may remember in the summer a poor woman sent to the hospital apparently to die. There was in the left upper lobe a vomica, so large that there was "metallic tinkling" in it; and for some weeks I took the opportunity of teaching you this rare sound. You know that it hardly ever occurs except with air in the cheat and perforation, and indicates a cavity bigger than your fist. So weakened was the patient by the loss of so much lung, that she was at first unable to feed herself even, and quitè soaked the bed with colliquative perspiraions. Yet, contrary to all we expected, she lost her perspiraed flesh, walked about the ward, and, finally, walked home during my absence from London, so that I cannot say what was the exact state of her chest on leaving. But I take for granted that the cavity remained unclosed, and probably will remain unclosed for the rest of her life. That it will do so for many years, I know from other cases. For example: R. S., a wine merchant, aged forty-two, was, in 1846, under the care of several of the most experienced in chest complaints of London physicians. He had a large vomica in the left apex, was excessively debilitated by it, and was sent home with the information that he could not live a month. Well, he picked up strength and flesh, was enabled to return to his business, and, when I saw him in 1858, twelve years afterwards, was in fair health, and as able to do a moderate day's work as anybody I know; but

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ascultation left no doubt that the vomica was still open in the lung, and that the small quantity of pus he expectorated came from it. In 1855, I advised a young man, with softening tubercles in the left lung, to accept a chance which he had of settling in the West Indies. Six years and a half afterwards, he returned to England for a temporary purpose, and came to me about some symptoms not entirely connected with his chest. I found that his vomica was still there, and secreting pus; but that he had never permanently lost again the flesh which a course of iron and cod-oil had put upon him. He had even had an attack of haemoptysis and gone through yellow fever, without serious injury."

TREATMENT—The remedies which promise most in tubercular consumption are such as improve the quality of the blood, and the general nutrition of the body—and foremost we may reckon cod-liver oil, rum and milk, preparations of steel combined with ammonia, or myrrh and other tonics, a pure, mild, dry air, a very nutritious diet, plenty of exercise, and a regimen tending to invigorate the whole frame.

For many years I have been convinced that it is to the healthy nutrition of the general system that we are called to direct our attention, and not to the state of the lungs. Our endeavours should be specially directed to the use of those means which invigorate the powers of life and thus allay irritation within the chest; and it is gratifying to find that my views are confirmed by Dr. C. J. B. Williams, a physician of the same age as myself, and also by Dr. T. K. Chambers, an able physician some years younger—both men of high professional standing. It is not so much the *existing* tubercles which we have to fear, as the constitutional *tendency* to tubercles and the increase of them. Dr. Chambers says, *(On Consumption, Medical Circular,* May 28, 1862).

"There is no question about the future conduct of the war, if only reinforcements"—he means the increase of tubercles—"can be stopped in their march. If the remaining portion of lung has retained life so long, it can retain life longer and the whole attention can be applied to its conservation. In what direction must we turn to aid in

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this conservation? To the lungs? But if we look to the histories of those who have lived long with vomicae or tubercles, they are by no means found to have taken special care of their lungs—they have not coddled or lived in-doors in even temperatures, hanging their lives on to their thermometers for fear of coughs; they have gone on with their professions or business or work; they have not 'laid a knife to their throat', but have eaten and drank like other people, and have enjoyed the gratification of their appetites. A patient of mine, over fifty, with copious formation of pus and condensed lungs (probably tubercular) from his youth, has kept hounds, broken his bones like other Nimrods, contested county elections, sat in parliament, enjoyed his champagne and other good things, but *never allows any doctoring of his chest.* An examination of it is a favour as a contribution to science. Leave then the respiratory organs alone, and turn your attention to the stomach and bowels, the true organs of nutrition, which will receive with open arms any care you bestow upon them."

The great object at which we should aim is to get the greatest amount of good food well digested and assimilated. Thus, the whole frame is most certainly and effectually renewed, and nature is assisted to got rid of the morbid product—tuberculous matter—which otherwise might be the death of the sufferer. For this purpose nothing yet discovered is half so suitable and efficacious as cod-liver oil in ginger or orange wine. It is easily assimilated, and the body is so sensibly nourished by it that it seems like a directly life-giving article. But as the appetite is often exceedingly deficient, quinine pills, No.115, page 202, or steel and quinine, as No. 84A, 84B or 85, page 184-85, should be taken alone first, or in conjunction with the oil. If a disgust for food is present, then first give milk in small and frequently repeated doses. Dr. Chambers has given some good advice on this subject. He says:

"If you find milk lie long in the stomach, and produce heartburn or acid eructations add lime-water to it. Food has an illogical habit of arguing in a circle; it creates the desire for food—of course, by strengthening the digestive organs; and thus, after a few days of milk diet, the patients will voluntarily ask for meat, and enjoy as a luxury that which a short time before excited the greatest disgust."

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"In the same way cod-liver oil will also act. It will often, like milk, create an appetite. But as a rule, especially in private practice, it is as well not to commence it too soon, as the disagreeableness of the taste and smell is difficult to get over at first, and it is much easier to take it when the appetite has begun to be renewed. Then it is not felt as a hardship even to begin, and in a short time patients will get really to like it; and they will like it, not merely as reasonable men like that which does them good but will, irrespectively of such knowledge, find it nice to the palate. Thus, children who always object to being done good to, will still often take to their oil with gusto."

At the commencement, the best plan is to take a tea-spoonful or two of the oil, twice or thrice a day, floating on a little ginger or orange wine, or on a dose of the mixture, No.84 A or 85. In the course of eight or ten days, the dose may be increased to three tea-spoonfuls, or a table-spoonful at a dose; and it may be taken at any time of the day the patient likes best, but the greatest distance from meals is to be preferred.

One of the most approved forms of administering steel and myrrh in this disease, is that so strongly recommended by Dr. Moses Griffiths.

Take of Myrrh, in powder	1	drachm;
Subcarbonate of potash	25	grains;
Rose water	7½	ounces;
Sulphate of iron	1	scruple;
Spirit of nutmeg	4	drachms;
White sugar	1	drachm.

Mix, and take three or four table-spoonfuls thrice a day.

If the patient prefers it in pills, he may take the following :

Take of Myrrh, in powder	2	drachms;
Sulphate of iron	1	scruple;
Subcarbonate of potash	1	drachm;
Extract of gentian	1½	drachm;

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Simple syrup, a sufficient quantity to make the whole into a mass.
Divide into sixty pills, and take two or three twice a day.

Steel and ammonia I think still better, and as already stated, they may be taken as prescribed in No. 84A, page 184. It is an excellent plan to take this medicine first for ten days, then to commence the oil.

Mercury, purgatives and squills ought to be avoided, because they are debilitating. *Blancard's pills of iodine and iron* merit particular confidence, as a tonic, and will often be found superior in their effects to iron and myrrh, or iron and ammonia. They may be procured at Jozeau's, 49, Haymarket.

COD-LIVER OIL, AND NEAT'S-FOOT OIL ALSO DUGONG OIL are remedies now highly and justly extolled in the treatment of consumptive diseases. In these diseases there is a deficient proportion of red globules in the blood, which these oils have the property of restoring and increasing. So efficacious has cod-liver oil been found in the Hospital for Consumption at Brompton that the physicians there use now about 600 gallons annually. At page 36, the reader will find a short description of the virtues of these substances, and likewise the relation of a case of consumption, in which the administration of neat's foot oil was followed by results highly satisfactory. As the improvement of the faulty nutrition which originates and keeps up this disease is of all things most important, our endeavours should be specially directed to cause a larger quantity of fatty matter to be assimilated. All kinds of food rich in fat will frequently produce these effects, and hence the value long attributed to milk, especially asses' milk,—the produce of the dairy, such as cream and milk, fat bacon, etc.; but in many cases, from the impaired state of the powers of the stomach, the patient is unable to digest such fat powers of food, and then the animal oils themselves are indicated, by giving which we save the digestive apparatus the trouble of manufacturing or separating them from the food. By giving considerable quantities of oil directly, a large proportion of it is at once assimilated, and the blood nourished and improved in quality. Such appears to be the *rationale* of the

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good effects of cod-liver oil. On this subject Dr. C. J. B. Williams says :

> "The proper treatment of consumption seems to be that which is calculated to improve the nutrition, prevent the irregularities of the circulation which tend to promote the tuberculous deposits, and as far as possible to elevate the condition of the health".
>
> "Pure air, nutritive digestible food, regular exercise, and well-arranged Habits of life,—these and their correlative hygienic measures stand in the first place, because they are equal or superior in power to any form of medicine, properly so called, in preventing the development of the disease".
>
> "There is one remedy infinitely superior to any other, and which stands quite in front of the rank of the other remedies. It is cod liver oil: it stands entirely alone as an agent in counteracting the cachectic condition which is characteristic of phthisical disease. It is in my opinion a mistaken view to regard cod-liver oil as a material which only plays the part in the body of a simple nutrient. Twenty years of experience, various in kind and extensive in its range, have convinced me that it has other and directly therapeutic powers. Over and over again I have seen not only an improvement of the system generally under its use, but a diminution in the amount of tubercular deposit. I entertain the conviction that it promotes the dispersion, absorption and removal of tubercle. This is a question too long to discuss here; but it may be observed that the cod-liver oil has a power of pervading the system more thoroughly than any other oil. It is highly assimilable, and peculiarly well tolerated by the stomach. It makes a particularly perfect emulsion. An indication of one of its remarkable properties is; the preference which it has had over other oils for the purpose of currying leather, owing to the penetrative power which it possesses. This divisibility promotes absorption, and the oil being taken into the blood pervades the system; and we have, as it were, a liquid oleaginous bath operating on the tuberculous matter."

Many patients take the oil unmixed, floated on a little ginger wine or milk or coffee. Some say that the addition of creosote occasionally makes the stomach more tolerant of the remedy. An ounce and a half of cod-liver oil, two drops of creosote, two drachms

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of compound tragacanth powder, and four ounces and a half of aniseed water, form a suitable mixture, of which an ounce or two may be taken thrice daily. Those who take the oil unmixed, on ginger wine, may cover the taste by eating dried orange-peel, or by introducing a little dinner salt into the mouth before and after the oil.

Ozonized cod-liver oil seems sometimes to be more efficacious than the common oil. From a long course of experiments, conducted at the Hospital for Consumption, Brompton, Ozonized cod-liver oil has been found to possess the remarkable property of reducing the rapidity of the pulse to its natural standard, without in any way lowering the power of the system.

This reduction usually takes place in the course of two or three days, and is progressively maintained for a considerable period of time, while the ozonized cod-liver oil is being taken, till it reaches its proper standard. A reduction of twenty beats has in some cases been observed to result in two, three, four or six days; in other instances a reduction of twenty-four has been noted in fourteen days thirty-four in thirteen days, thirty-six in twenty-two days, and forty in eleven days.

Rum and milk in the morning I have found exceedingly useful, not only in this disease, but also in many other complaints of debility. I have known *Godbold's balsam* very useful. Dr. Duncan of Edinburgh, states *(Observations on Pulmonary Consumption)* that in several instances he has known cough, with alarming appearances, removed by the use of this balsam. It may be taken to the extent of a dessert-spoonful three or four times a day, and if it be applicable to the case, it generally works a beneficial change within a fortnight.

Some people have puffed off the *hypo-phosphites of iron,* soda, etc., as a cure for consumption, but they have been tried at the Consumptive Hospital, and proved useless. Arseniate of soda, or iron, has also been highly extolled, and many other things, all equally worthless.

Gass-stoves and every other kind of stove, are extremely prejudicial in all cases of consumption and bronchitis.

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The diet should be very nutritious. A certain quantity of the milder kinds of animal food, and even a little wine when the strength is much reduced, are proper, if they are not found to increase the feverishness. A wine called *Catalan* is light and very suitable. It is much used in the Consumptive Hospital at Brompton, and is sold by Messrs. Kinloch and Co., 14, Barge Yard, Bucklersbury. Chocolate and fat bacon or pork for breakfast are much to be recommended. The object here is to nourish without stimulating, and the richest milk and cream, with fresh eggs, are advisable. In every species of consumption a much freer diet is required in the advanced periods of the disease, than can be safely indulged in at the the commencement. Rum and milk, the first thing in the morning or twice a day, I strongly recommend as of the greatest service. It is often almost as efficacious as cod-liver oil. It may be taken with bread and butter, as a meal, at breakfast and tea, if the patient prefers those times. A tumblerful of rich milk, a table-spoonful of old rum and a little sugar is the usual quantity at each period.

In every stage of consumption particular symptoms require palliation; such are pain in the chest, cough and night sweats, and for these certain remedies are generally applicable. For local pain, blisters or issues sometimes afford great relief. The following plaster is strongly recommended by Dr. Paris, and is useful in relieving both the pain and cough :

Take of Hard soap	1	ounce;
Lead plaster	2	drachms;
Muriate of ammonia, in powder		half a drachm.

Mix, and make a plaster. Spread it on leather, apply it to the chest immediately, and renew it once in twenty-four hours.

The following draught is much worthy of attention as a palliative for the cough; but if the cod-liver oil relieves the cough, no other medicine need be taken :

Take of Extract of hemlock	2	grains;
Extract of henbane	2	grains;
Mucilage of gum arabic	2	drachms.

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Rub these well together till they are thoroughly incorporated, then add acetated liquor of ammonia, pure water, of each, half an ounce; syrup, one drachm. This makes a draught, to be taken every four hours.

Aniseed has considerable power in allaying the cough. Infuse half an ounce of the bruised seeds in half a pint of distilled water at a temperature not exceeding 120 degrees. Let it stand till it is cold, and try a wine-glassful of this aniseed infusion when the cough is troublesome. It is better than any form of opium, but if it does not succeed, then add half a tea-spoonful of ipecacuanha wine, or paregoric, to each dose.

In general, acids most effectually check the night pera-pirations. Thirty or forty drops of the diluted vitriolic acid may be given at bed-time, in a little water. If this fail, four or five grains of the compound power of ipecacuanha may be taken, and it often perfectly succeeds. Dr. Vatson says he has found the compound kino powder, in doses of ten or twelve grains "an admirable medicine for the nocturnal perspirations.—*Prac. of Physic*, vol. 2; p. 209.

Dr. Barlow says, (*Practice of Physic,* p. 318), "Against night sweats there is no remedy equal to the combination of zinc and henbane".

Take of Sulphate of zinc ..... 6 grains;
Extract of henbane ..... 24 grains.
Mix them, and divide into six pills; one to be taken every night.

Diarrhoea must always be checked, for it is very exhausting, and its continuance increases the tendency to the deposition of tubercles. For this purpose chalk mixture will sometimes be sufficient. The sulphate of copper is very effectual; it should be taken in the dose of a fourth or half of a grain at first, made into a pill with confection of roses, and repeated two or three times a day. Or five grains of extract of logwood may be taken in a draught with a table-spoonful of water, and one of cinnamon water.

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Take of Sulphate of copper ..... 3 grains;
Extract of logwood ..... 2½ scruples.
Mix them, and divide into twelve pills; one to be taken after every liquid motion.

Or the combination, No. 127, page 208, may be employed. Small doses of the superacetate of lead (page 119-20) are often useful in moderating the diarrhoea, and also the night sweats; and the nitrate of bismuth answers well in some instances.[1] In some

1. The following is an instructive case of *tuberculous phthisis* cured, and will be interesting to my readers. It occurred at Paris, in the practice of M. Laennec. He says, "An English gentleman, aged thirty-six, detained in Paris as a prisoner of war in September 1813, had an attack of spitting of blood, followed by a cough, at first dry, but in the course of a few weeks, accompanied by purulent sputa", (that is, expectoration of pus or matter). "To these symptoms were added a well-marked hectic, considerable diffculty of breathing, copious night sweats, emaciation, and great debility. The chest sounded well every where, except under the right clavicle and in the arm-pit of the same side. The spitting of blood returned, in a slight degree, now and then, and in December he had diarrhoea, which was with difficulty checked by astringents. In the beginning of January he was so much reduced, that both M. Halle and Bayle agreed with me in opinion, that his death might be daily looked for. On the 15th of January, during a severe fit of coughing and after bringing up some blood, he expectorated a solid mass of the size of a filbert, which, on examination, I found to be evidently a tubercle in the second stage, surrounded, apparently, by a portion of the pulmonary tissue. This patient remained in the same degree of extreme emaciation and debility all January, being expected to die daily; but in the beginning of February, the perspiration and diarrhoea ceased spontaneously, the expectoration sensibly diminished, and the pulse, which had been constantly as high as 120, fell to 90. In a few days the appetite returned, the patient began to move about in his room, his emaciation became less, and against the end of the month, his convalescence was evident. In the beginning of April he was perfectly recovered; and his health has continued good ever since, without even the least cough, and without his being at all guarded in his climate or regimen. In 1818, this patient again consulted me for a different complaint, and I took the opportunity of examining his chest, by means of the stethoscope. The only thing I could detect, was the comparative indistinctness of respiration in the superior portion of the right lung, as low as the third rib. This part, however, sounded as well on peroussion as the opposite side. From these circumstances, I am of opinion that the excavation which contained the expectorated tubercles must have been healed; and as the total absence of cough, difculty of breathing, and expectoration, for so long a period, forbids the supposition of the existence of others in the lungs, I think we have a right to consider this patient as perfectly cured. In 1824, this gentleman was examined at Rome by Dr. James Clarke, who recognized him as the subject

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cases of chronic consumption in which distressing diarrhoea is a prominent symptom, the alkaline infusion of sarsaparilla will be found of much service in checking the diarrhoea, and greatly improving the general condition of the patient.

Take of Sarsaparilla root	4	ounces;
Liquorice root	3	drachms;
Lime-water	1	quart.

Let the roots divest in the lime-water eight hours, then strain, and take a quarter of a pint twice a day.

For spitting of blood -*(hoemoptysis)*, a draught of ipecacuanha wine and sulphate of soda is particularly valuable, and so it is for feverishness and the reduction of inordinate vascular action generally.

Take of Ipecacuanha wine	1½	drachm;
Sulphate of soda	1	drachm;
infusion of cascarilla bark	10	drachms.

Mix them for a draught, to be taken thrice a day until the spitting of blood is checked; then about once a day.

It now only remains for me to advert to air and exercise, a subject of importance at all times, and, in the commencement of the disease of the first moment. All consumptive invalids require a dry and equable atmosphere, and the sooner this is resorted to the greater will be the probability of success. A great diversity of opinion has obtained among professional men in respect to the value and efficacy of the climate of different places, in consumptive disorders, but this has arisen from the same source as the interminable differences and contradictions existing on all subjects of knowledge, namely, ignorance of the subjects or at least, insufficient information amongst the majority. Of late years it has

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of the case just detailed. I saw him also the same year, and found him precisely in the same state as in 1818."—*Treatise on Diseases of the Chest*, page 326. Sir James Clarke testifies that this gentleman was living in 1827, and in good health.

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been fully investigated, and the most valuable *data* have been furnished, whereby we are enabled to form correct opinions, and the sum of what is known on this question will, therefore, I hope, be found in these pages.

It is certain that in Italy, France, Madeira, Lisbon and other southern parts of Europe, consumption is very frequent among the native inhabitants; that in the latter stages of the disease, a change to either of them generally accelerates rather than retards a fatal termination in English patients; that the duration of the disease in Italy often does not exceed three or four months; and that the accommodations in almost all these places are bad. The Italian physicians acknowledge, that in a hundred deaths in that country, there are, on an average, twenty-five by pulmonary consumption; and the distinguished M. Bayle, whose authority cannot be doubted, has asserted, that of five hundred patients who die in the Parisian hospitals, one hundred die of *phthisis* and of the remaining four hundred, at least fifty are complicated with that malady.

Drs. Gourlay, Cordon and Heineker, each of whom resided at Madeira, discourage us from sending persons thither, unless in the very beginning of the malady; the first observing, that whole families have at times been swept off there, by consumption. Several object to the whole of Dauphine, a great part of the South of France and North of Italy, and many of the neighbouring places, as being under the influence of cold winds from the mountains in the vicinity, and as destructive to foreigners labouring under *phthisis*. Drs. Southey, James Johnson, Sinclair, and Hennen, think unfavourably of Malta, Sicily, and other islands in the Mediterranean; and M. Portal has the same feeling with respect to the South of France.[1]

1. Montpelier was formerly a celebrated place for the resort of English patients labouring under consumption. Dr. Hawkins says, 1829, (*Medical Statistics*, page 31). The annual proportion of deaths at Montpelier was greater thirty years ago, and is greater at present, than in London; and although the mortality of great cities is usually much larger than that of provinces or countries, yet the mortality of London is exactly the Same at present as that of the department of the Herault, the southern and fertile, and long supposed most salubrious district of France, of which Montpelier is the capital. Finke, a German writer, who wrote on *Medical Geography*, in 1792, speaks with surprise and reprobation of the custom which then prevailed in England, of sending invalids

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The abrupt vicissitudes of the climate of the Mediterranean are extremely productive of pulmonary consumption among the European residents; and several able British practitioners state, that when it does approach, nothing but a retreat from its shores before the autumn sets in, can give a shadow of hope of safety to the patient, as has been proved by the recovery of many. invalids sent home in the autumn, and the death of many who remained behind—*Dr. J. Johnson on tropical Climates*, p. 338. The deaths by consumption among the inhabitants of Malta, constitute nearly one-tenth of the whole mortality.

It is of far greater importance how such patients are managed, how they live in the house and out of the house, than where they live. The general plan of treating such cases is thoroughly unsound; instead of being soothing, sustaining and invigorating, it is ordinarily irritating and debilitating. The system must be changed, and the tissues be strengthened instead of being defended; the patient should, if possible, enjoy a dry air, and *plenty of it*, of course, cautiously taken with free exercise, which will be found a far wiser and better course than to send them to a foreign station. Boating is excellent.

Dr. Renton says, that between the years 1827 and 1830, *nineteen* patients labouring under confirmed consumption arrived at Madeira, the whole of whom died, some speedily and the rest at no distant period. In another statement he remarks that of *forty-seven* such advanced cases sent to Madeira, thirty-two died within six months after their arrival; six died on a second winter's trial of the climate; six died after returning to England: what is the result of the remaining three cases is not known. Dr. Mason says, "Few places will be found where the system is more liable to disorder"; and I am entirely of this opinion.

A trustworthy visitor to Pau says the weather there "is really very variable", and that the "prostration of energies", both mental

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to the South of France; and declares that the cutting winds of those quarters annually destroy many of those wanderers in quest of a milder sky". Notwithstanding these facts are so instructive and admonitory, it may be doubted whether the ordinary practice in these cases is even now much improved.

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and physical, is felt by all "Sometimes Pau is visited by what is called 'Le vent d'Espagne', a sort of mild sirocco, specially unfavourable for those persons whose lungs are affected". I should think so Egypt, and Mentone, and its neighbourhood, are now the fashionable resorts of the consumptive.

Every consumptive person, indeed—all invalids, should be careful to select a house with a *southern aspect,* wherever they reside. Attention to this point is, in most cases, of considerable moment.

Exercise, and frequent change of air, are of the highest importance in this disease, and will, in some instances, prove a powerful means of cure; for many patients, by constant change, (travelling as much as possible on horseback, or in an open carriage), have perfectly recovered, who always became worse when they remained a few days at a place.—*Dr. Foart Simmons on Pulmonary Consumption.* Where the circumstances of the individual will not allow of this perpetual change, as much exercise as possible, short of fatigue should be substituted at home. Exercise on a spring deal board is one of the most preferable modes within doors, and in a carriage or on horseback abroad. Sydenham, one of the most sensible and discerning of physicians, used to recommend horse exercise as a remedy of great power in the cure of consumption, and when this malady occurs in a cathetic, impoverished habit, it is without doubt often of much service. Cases might easily be brought forward in which it proved an effectual means of recovery, after all hope of such an event had been abandoned. Dr. Baynard, by constant riding in the open air, recovered from a consumption, when every body gave him over as lost; and the author of *"The Best Methods of Preserving Health"*, relates an instance where a patient was cured by riding, after being brought so low, that no recovery could be expected, either from medicine or even exercise. See also the value of exercise, (although of a different kind), illustrated in the case of severe cough and curved spine, which I have related from Captain Clias's observations on Gymnastics, under *Spinal Curvature.*

Ladies suffering from nervous pain in the chest and cough, are

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constantly to be found under a medical treatment applicable only to true tubercular phthisis. They have lowering febrifuge draughts given them, and antimonials; blisters are ordered, leeches, confinement to the house; and often they are condemned to Madeira ! The consequence is they grow worse and worse. The system is unnatural, debilitating, and the very reverse of what the condition requires. Perhaps it may be of some service to introduce a case in illustration from my own practice, for the families are numerous who are exceedingly distressed by the consequences of not merely so unnecessary, but of so injurious a mode of proceeding.

A young lady was sent to me from the North of Scotland, suffering from cough, pain in the side, general weakness, quick pulse and loss of appetite. She had been for some time declining in health, and had grown nervous and fearful; did not sleep well at night; and the skin had become harsh and dark coloured. The family physician at Inverness had confined her to the house, ordered blisters to the side, and thought so unfavourably of her case, as at once to declare that she ought to go without delay to Madeira! Her mother had died of consumption about twelve months before, and she had already an elder sister at Madeira for the benefit of her health. It was, however, very inconvenient for the father to send this daughter thither also, and having been recommended to send her to Epsom, she came in the month of December. At that time, in addition to the symptoms enumerated above, she was regularly flushed in the face in the evening, and then suffered from increased pain in the side, and acceleration of the pulse.

What was to be done? On examination I was convinced it was altogether a case of nervous and muscular debility; that the cough, pain, and feverishness had this origin and no other; that there was no present disease in the lungs whatever, and that there was every reason to believe if she was treated on a general plan, which soothed and encouraged the mind at the same time that it gave tone and firmness to the physical frame, she would soon exhibit symptoms of amendment, and by degrees perfectly recover. We were not disappointed in our expectations. She was extremely ill for the first month after her arrival here, and we found every thing of an enervating nature to be immediately and decidedly injurious. An invigorating plan was therefore adopted throughout. She was taken

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daily into the air, and enjoined to use regular exercise indoors. Before six weeks had expired she was on horse-back regularly, every day the weather permitted; and in June returned home, blooming in appearance, and in perfect health. Madeira, with its moist climate, and the walls of its habitations streaming continually with moisture[1], not being found to agree with her elder sister, she was requested to return to England, and place herself under our care here, which she did; and by pursuing the same means, she also soon returned home in a very improved state of health.

I think it my duty to warn the heads of families against being easily persuaded either to banish their children to Madeira or Italy, or to shut them up in warm rooms at home. These are generally very unnecessary practices, and worse than useless. There is often extreme cruelty in them. It is of far greater consequence how such patients live out of the house and in the house, than where they live; and if they would only avail themselves of all the advantages they enjoy in this country, they never need think of visiting another.

Sydenham considered horse exercise not only proper in slight indispositions, accompanied with a frequent cough and wasting, but even in confirmed consumption, wherein looseness has supervened, and is succeeded by night sweats, and I have no doubt of its eminent utility in such instances. Exercise, and particularly constant travelling, has a considerable and very sensible effect in restraining inordinate secretions in the body, so that those who have been a long time troubled with looseness, generally become costive in travelling, and such as have been harassed by habitual cough, almost always find it much ameliorated, and often entirely removed by this means.[2] It ought to be observed, however, that riding on horseback, in young persons of a plethoric habit, and high complexion, must be resorted to with caution, as it might otherwise tend to occasion or increase symptoms of inflammation in the lungs.

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1. This arises from the houses being built with sea sand.
2. Interesting cases of consumption, cured by exercise, will be found in my Best *Methods of Improving Health*, by regulating the diet and regimen.

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In the consumption met with in mothers who have suckled their infants too long, and without enjoying sufficient nourishment, the Peruvian bark in free doses, combined with a nutritious diet, will be the best remedy. In emaciated and consumptive habits from a venereal cause, Sir William Fordyce praises the compound decoction of sarsaparilla as the greatest restorer of the appetite, flesh, colour, and strength, which he knew of; and, no doubt, it is in such consumptive cases, a medicine of eminent utility.

Is consumption contagious? Some eminent physicians answer decidedly in the negative; my answer is as decidedly in the affirmative. The human body is extremely sensitive to infection, and therefore no person should for any great length of time sleep with an invalid actually in a consumption, or even strongly disposed to it. Young members of the same family ought not to be constantly with such an invalid.

CONVULSIONS

Convulsions are violent and involuntary contractions of a part, or the whole of the body, accompanied in some cases with rigidity and tension, but more frequently with strong and sudden agitations. There is frequently a gnashing of the teeth, and a forcible clenching of the hands. Differences occur in the character of the disease in different persons, and depend upon the peculiar disposition, habit, or stage of life, in which it makes its appearance.

The symptoms indicating the approach of convulsions are often overlooked; in children especially they will most frequently be found to have been preceded by feverish symptoms, by drowsiness, yawning, sighing, increased irritability, frequent crying and peevishness, impatience of sound and light, or by some derangement of the process of digestion, or some peculiarity of respiration.

The most frequent *causes* of convulsion consist in pressure on the brain, or in irritation situated in some very sensitive organ, as the stomach, bowels, womb or kidneys. It frequently follows severe fright, and the suppression of an accustomed discharge. In adults it

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may arise from a strong excitement of the passions, and from sympathy; and in infants obscure inflammation of the brain is not an unfrequent cause, as is the case also with inflammation of the *glottis.*

TREATMENT—Give directly a glass or two of good wine, and the draught of ether and sal. volatile, No. 35B, page 159, and follow it in ten minutes with the aperient draught, No. 28, page 156, and one of the pills, No. 97, page 191. It is a primary object to procure a sufficient motion; and after that, tonics are usually the best remedies, with plenty of exercise. The pills, No. 102, 103, or 115, page 202, are suitable, and so is the mixture, No. 84 B, page 185. The head and face should be freely sponged with cold water. Twelve drops of liquid ammonia in water is excellent for relief in the fit.

The convulsions of infants invariably originate in some irritation in the brain, bowels or stomach, or from teething; and are most successfully treated by aperients or purgatives, and by the immediate use of a warm bath at about 98 or 100 degrees, giving in the intervals, some mild aperient occasionally, with plenty of free air and exercise, great attention being, at the same time, paid to diet. Half a grain of calomel and flve of rhubarb, form one of the best purgatives for exhibition during the fit, and to prevent its recurrence, the powder, No. 121, page 205, will be found very useful. If the stools are of an unhealthy colour, this powder should be given twice or thrice a week, till they recover a healthy appearance and the little patient looks well.

It is not advisable to abstract blood in the convulsions of infants or children, unless there should exist a full habit of body, and signs of an overloaded state of the vessels of the brain, or of inflammation in the brain, the principal of which signs are—warm, tumid scalp and face, flushed countenance, the fore part of the head *(fontanelle)* elevated and tense, eyes suffused with blood, quick, full, hard pulse, or one that is slow and oppressed, the veins of the head and neck large and dark. In this case leeches may be advantageously applied behind the ears; or the jugular vein may be punctured; but in general the means above advised are the most proper, to which we may add the free sprinkling of cold water over the face and head (which

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is one of the most powerful stimulants known), the application of smelling salts to the nostrils, and the rubbing the hands and feet well with eau de Cologne; or any mild stimulant. Purgatives cannot always be given immediately, from the children not having the power of swallowing, but the clyster No. 8, page 146, should be exhibited as speedily as possible. Should these ingredients not be easily procure the clyster may consist of some warm water, salt and oil or melted butter, which may be thrown up with a common syringe, *if Twinberrow's Syringe* is not at hand.

A great many children die in convulsions, the consequence of excessive feeding, and improper confinement within doors; and it will be well for mothers, whose infants are subject to convulsive fits, to be attentive to the quantity and quality of their food, and to their having sufficient exercise. I know a lady of rank, who lost as many as three or four infants (it may be more), in this way, and from this cause alone. The parents are both healthy, and the children were all full-grown, strong, and healthy at the birth, and appeared so for some months after; but they invariably died at about the age of twelve or sixteen months, evidently from improper treatment, though the too fond mother could never conceive the cause. The nurse and mother joined in stuffing them throughout the day, and thinking that they would perish if left without food during the night, it was a regular practice to take them up and feed them four times during that period![1]

Dr. Underwood correctly remarks, that when infantile convulsions prove suddenly fatal, they are commonly symptomatic, and are occasioned much oftener than is suspected by over-feeding. When, therefore, an infant falls suddenly into a convulsion very soon after sucking or feeding (more especially if on any thing actually improper), and the bowels have been some days in an orderly state, we may reasonably presume the irritation to be in the stomach; and in such instances, the fittest and most expeditious means of recovery consists in the prompt administration

1. I have known some of the largest and finest infants I have ever seen, die suddenly in the month, immediately after the nurse had boasted of their having eaten *three boats full of victuals!"—Dr. Underwood on Children's Diseases,* p. 246.

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of an emetic, for as soon as the offending material is discharged, the child almost instantly begins to recover. As an emetic, three or four grains of ipecacuanha powder, or sulphate of zinc, dissolved in water, and given directly, will be found the most speedy in its operation, but as no time is to be lost in bad cases, and it will require some minutes at least to procure this medicine, the nurse ought to endeavour to provoke immediate vomiting, by irritating the back part of the throat with the finger or a feather, the child being, at the same time, supported by a hand placed under the stomach and belly, in which position it will be made to vomit more readily than in any other.

An examination of the state of the gums should always be made when convulsions take place during teething, and if they are even full, they ought to be scarified; but if they are inflamed, the scarification should be very free, so as not only to take away some blood from the part inflamed, but also to remove the whole tension of the gums and of the membrane which covers the tooth.[1]

There is a *peculiar kind of convulsions* found in infants and young children, connected with attacks of sonorous inspiration and a crowing sound, which merits particular attention. It consists in a peculiar mode of inspiration, which it is difficult accurately to describe : the convulsive affection occurs by fits, with longer or shorter intervals between them, and of longer or shorter duration in different cases. The child having had no apparent warning is suddenly seized with a spasmodic inspiration, consisting of distinct

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1. "This membrane, under inflammation, becomes extremely sensible, to pain, and being stretched upon the tooth, requires to be entirely set at liberty. When convulsions occur in teething, the lenity of the surgeon who omits to destroy the inflamed gum sufficiently with the knife, is ill judged, and is in effect, the greatest cruelty, to the child. The writer has seen many cases in which convulsions have ceased on scarifying the gums extensively, after slight incisions of them have failed to produce any advantage. The late Mr. John Hunter, in his work on the subject of the teeth, mentions that he had scarified the gums of a child ten times, with manifest advantage each time, and a diminution of the symptoms which had arisen from the advancement of the tooth to the surface."—*The John Clarke on the Diseases of Children,* page 104. This is an extract from a very able work of a physician of great discernment, and who is deservedly a high authority in practical medicine.

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attempts to fill the chest, between each of which a squeaking noise is often made; the eyes stare, and the child is evidently in great distress; the face and the extremities, if the fit continues long, become purple, the head is thrown backwards, wad the spine is often bent forwards; at length a strong expiration takes place, a fit of crying generally succeeds, and the child, evidently much exhausted, often falls asleep. These paroxysms usually occur many times in the day, and are often brought on by straining, by exercise, and by fretting, and sometimes they come on from no apparent cause. The child may die in one of these attacks. The complaint is often found during teething.

Accompanying the above symptoms, there is sometimes a bending of the toes downwards, clenching of the fists, and the insertion of the thumbs into the palms of the hands, not only during the paroxysm, but at other times.

The attacks commonly take place after a full meal, and often occur immediately upon waking from sleepy though before the time of waking the child had been lying in a most-tranquil state. This affection is sometimes called *chronic croup*, but it is totally different from croup, and seems to be owing to *a spasm and contraction of the glottis,* or top of the windpipe. It is technically called *Laryngismus Stridulus,* and by some *Childcrowing.*

Dr. John Cheyne says, in his work on water in the head, that the distinctive mark of this disease is "*a crowing inspiration with purple complexion, not followed by cough*". In some cases this affection is attended not merely with a permanent clenching of the hand upon the thumb, but also with a very remarkable fixed spasm of the toes, particularly the great toe, which gives a look of swelled deformity to the upper part of the foot.

This disease is unaccompanied by fever, or any material derangement of the general health. When cough attends, which is not always the case, it is not hoarse, and the breathing during the intervals is perfectly free. These circumstances distinguish it from croup.

TREATMENT—During the fit, the little patient should be instantly plunged into a warm bath at 98 degrees, and be kept in it for fifteen

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or twenty minutes, and whilst in the bath cold water should be freely sprinkled on the face. An injection of warm water and oil or soap should be instantly thrown up the rectum, and if tincture of assafoetida or oil of turpentine is at hand, one or two tea-spoonfuls may be mixed with the injection. Striking the child well on the back, and applying ammonia to the nostrils, are also advisable.

After recovery from the fits the treatment mainly consists in the administration of warm purgative, as No. 121, page 205, with two or three brains of mercury, with chalk, at bed-time—a well regulated diet,—and pure air. An immediate change into a very pure country air is of eminent service. The room the child inhabits should be large, and freely ventilated; and sometimes a little carbonate of ammonia, as in No. 79, page 181, will be found serviceable. When the head is evidently affected, leeches behind the ears are required; but if the cheeks of the child are cold and flabby, the abstraction of blood must be avoided.[1] I have seen this treatment of the utmost service. In one case the complaint had become chronic, and the catch or spasm on the breath of the infant, which frequently took place, was occasionally very alarming; the apothecary said nothing more could be done; however, the means now advised speedily restored the child, and it continues well.

In Puerperal Convulsions

Or the convulsions occurring in child-bed, the immediate cause is the peculiar irritation of the nervous system, as participating in the irritation of the womb; and hence it seems obvious, that the radical and specific cure is a termination of the labour. The first step is to open a vein and bleed copiously, and from a large orifice, till the patient faints; the hair should be immediately removed from the head, lotions of cold water, or pounded ice, be applied all over it

1. By giving the child the advantage of a pure air, and of a succession of good nurses, during the whole period of dentition, more good has appeared to be done than by all other measures put together. Dr. Marsh remarks, that all his cases occurred in children of a scrofulous constitution; a fact which leads him to insist stilt more strongly on the importance of a pure atmosphere, healthy nutriments and tonics.—*Cyclopaedia of Pract. Medicine,* vol. ii. p. 350.

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by wetted napkins, changed for others as soon as they acquire the least degree of warmth. At the same time a purgative injection, (as No. 8, page 146, to which two drachms of assafoetida gum must be added), should be thrown up the rectum, which may be followed by two grains of calomel given by the mouth, with the purgative draught, No. 28, page 156.

If the mouth of the womb should be rigid, and but little dilated at the commencement of the convulsions, this depleting plan generally renders it lax and dilatable, when the midwife should without delay introduce the hand, slowly dilate the mouth of the womb, break the membranes, lay hold of the child's feet, and deliver by turning. This should be done although there be no distinct labour-pains, provided the mouth of the womb is open.

If the convulsions arise from excessive *haemorrhage,* and other sources of exhaustion, blood-letting would be improper. Then give henbane and camphor, as in No. 79, page 181 and No. 124A, page 206. Convulsions may be of an *hysterical* character. Then give brandy, ether, and sal volatile, as in No. 35B, page 159, and a purge.

CORNS

In their first formation, corns are the production of the outer skin alone, but by gradually thickening they come at length to be connected with the true skin beneath, and in some instances, even to proceed to the depth of the subjacent muscles. They are owing to repeated and long continued pressure.

The cure consists in removing pressure from the part, by wearing very easy shoes, and in cutting or paring the excrescence down as close as possible, without giving pain, after soaking them a little in warm water, when some stimulating preparation, as No. 46, p. 163, should be rubbed over it night and morning. The best applications are No. 46, the juice of house-leek, or purslane, or the compound ammoniac plaster, No. 132, page 210. Mr. Samuel Cooper, in his invaluable SURGICAL DICTIONARY, recommends the plaster, No. 139, page 214, as infallible. When the corn is on the

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sole of the foot, a felt sole should be put in the shoe, wherein a hole has been cut, corresponding to the situation, size and figure of the corn.

I cannot but think that the state of the general health even influences the growth of corns, because there are persons, who for life wear tight shoes, and take no care of their feet, and yet are never incommoded with corns, while others are constantly troubled with them, although they pay much attention to themselves; and because some are for a time vexed with corns, and then become quite free from them, though they continue to wear the same kind of shoes and stockings. Therefore, an attention to the improvement of the general health may sometimes have great effect in assisting us to remove corns.

COSTIVENESS

Habitual constipation is met with in two different descriptions of persons, that is, in those who are of a robust habit, with a hearty appetite and strong digestive powers; and in others who are of infirm or delicate health, with moderate or deficient appetite, and weak digestion. The motions of the former when discharged are compact and voluminous; those of the latter generally hard, slender and sometimes lumpy.

The first kind of costiveness seems to arise from an excess of action in the absorbent, or other vessels of the bowels, and from a free use of heating, astringent food, which such persons generally indulge in; while the other description depends upon weakness of the intestines, and a consequent sluggishness in the peristaltic motion. Both kinds are very much increased by all sorts of astringent food.

Whatever gives rise to an impaired nervous or muscular power in any part of the intestinal canal, may be a *cause* of costiveness. I would direct the reader's attention particularly to the following causes of the complaint, *viz* the use of heavy, adulterated bread; tea and other astringent beverages; spirits and other stimulant drinks; too long indulgence in sleep and too warm beds; excessive

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perspiration; contraction of the *colon* or *coecum*, or chronic inflammation there; contraction or stricture of the rectum; a deficiency of active exercise, and inattention to the first intimation to motion. Valvular disease of the heart, and affection of the kidneys, are also causes of scanty motions and constipation.

Costiveness in the human subject is now so common an evil, and one which may lead to such serious consequences; it is one so frequently a symptom of considerable disorder and mischief, and sometimes in itself an affection giving rise to the most painful feelings, and requiring so prompt and skilful a treatment, that I shall consult the interests of the public in treating it at some length, and offering here a sketch of the anatomy and physiology of the lower intestines.

The intestines are divided into the *small* and *large* intestines; the former are subdivided into the *duodenum, jejunum* and *ileum*, the latter into the *coecum*, *colon*, and *rectum*. The small intestines are usually thirty feet in length, or about five times the length of the body in the adult, and the large intestines about six feet, or one length of the body.[1] The younger the subject the longer is the intestinal canal. In an infant they have been found to be upwards of eleven times the length of the body.

The intestinal canal has three coats or membranes, *viz.* the peritoneal, the muscular and the mucous. The muscular coat of the *coecum* and *colon* is much paler and thinner, (while the muscular coat of the rectum is thicker), than that of the small intestines. The muscular membrane or coat both in the small and large intestines is composed of longitudinal and circular fibres, but the longitudinal fibres of the large intestines are united into three distinct bands, and are shorter than the intestine itself, so that they cause it to become puckered, shortened, as it were, and to present certain prominencies externally.

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1. Bell says, about six feet *(Anatomy of the Human Body,* vol. iii. page 305, *sixth edition);* Cloquet says, " the total length of the large intestines is about seven feet in a man of ordinary size. It forms about the fifth of that of the small intestines". — *System of Anatomy*, page 619, *second edition.*

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At the termination of the *ileum*, the large intestines begin by the *ileum* entering the *coecum*, which is inserted into it so as to form an acute angle below, and nearly a right angle above. Here a valve is formed, clearly marking the commencement of the large intestines, which valve is designed to prevent the regurgitation of the faeces into the small intestines. The length of the *coecum* is about three or four fingers-breadth; it is a round or slightly conical sac, divided into large cells, presenting on its outer surface large bulgings. Its volume is considerable, being often three times that of the small intestines, and surpasses that of the colon and rectum.

The *colon* is the most considerable and the most important portion of the large intestines. It ascends on the right side of the small intestines, until it gets under the margin of the liver, and in contact with the gall-bladder—then it takes a course across the belly, forming an arch (called the transverse arch of the colon) before or immediately under the stomach, above the small intestines,—then it descends, bending down on the left side, ending in the sigmoid flexure of the colon, which is formed by a narrowing and contraction, and closer adhesion of the gut to the loins below the left kidney, occupying the cup of the ileum on the left side. The colon then terminates in the *rectum,* the lower extremity of which terminates in the anus or fundament.

From this account, it is evident that the colon describes in the belly a circle which measures nearly its whole circumference, and which surrounds the convolutions of the small intestines. An engraving of the course of the larger bowels, and likewise one skewing the different regions of the abdomen, may be seen in the author's TREATISE ON THE DISEASES OF FAMALES. These engravings will materially aid the reader in understanding this subject.

The *rectum,* the last portion of the large intestines, falls into the pelvis, running down betwixt the sacrum, (the broad bone at the bottom of the spine), and bladder of urine. It has a strong muscular coat, and the mouths of many ducts or follicles open on its surface, in part the source of the mucous discharge, sometimes poured out in this gut.[1] It is cylindrical in the greater part of its

1. No intestine receives so many blood-vessels as the rectum in proportion to its volume." *Cloquet's Anatomy*, page 622, *second edition*,

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extent; but near the fundament commonly presents a more or less considerable expansion. It is less voluminous than the coecum and colon, yet is susceptible of very great dilatation.

Digestion in the stomach consists chiefly in the solution of the food in the gastric juices, whereby a semi-fluid, opaque, yellowish-white mass is formed, called *chyme;* this after a time passes through the *pyloric*, or lower orifice of the stomach, into the small intestines, where it experiences other new and essential changes. The *chyme* which passes out of the stomach is a slimy homogeneous pulp, consisting of two parts, the smaller portion excrementitious, and the larger portion chylous or nutritive, and the office of the small intestines is the absorption into the blood of the nutritive part of the food, by the lacteal vessels opening on their internal surface.

One obvious use of the large intestines is to be a receptacle and reservoir for the useless part of the food; and especially for the fecal secretion from the blood. They are more capacious, though shorter, than the smaller bowels. The peculiar odour in the large intestines is supposed to proceed from a volatile oil, apparently secreted chiefly in the coecum. The *coecum* is considered a very important part of the large intestines also, because the last act of digestion is performed in it, an acid, albuminous, and solvent fluid being secreted for this purpose, by its large follicular glands,—and because it much retards the descent of the food and faeces.

Professional men have usually regarded the foeces as solely the excrementitious portion of the food, separated in the intestines from the nutritive part; but this is an error. The foeces are mainly a secretion from the blood—a secretion of worn-out material which nature seeks to expel by this channel; and hence we discover the principal cause of the various discomforts and injuries resulting from habitual constipation. It is a direct check on one of the most essential functions of digestion—of one of the most important means of purifying the blood, and aiding in the nutrition of the general frame. Under habitual constipation, the blood cannot be fully purified ; wornout and noxious matter is thrown back again upon the blood, to contaminate and obstruct all the vessels of the

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body. Hence arise acrid eructations, deficient appetite, nausea, confusion and pains in the head, cramps, giddiness and other painful feelings.[1]

The received opinion among physiologists is, that the faecal matter passes freely from the sigmoid flexure of the colon into the rectum, and gradually distends the latter until, by its pressure, such a sense of uneasiness is communicated to the sphincter muscle of the anus and perineum, as to rouse the diaphragm and abdominal muscles to effect its expulsion from the body. It seems also a general opinion, that an accumulation of the faeces ordinarily takes place in the pouch or lower portion of the rectum.

TREATMENT—In the first place, I warn the constipated not to depend on aperient medicine for their relief, for it never answers. It is a very injurious practice, the refuge of ignorance, always aggravating the evil. They must endeavour to conquer it by diet, exercise, friction, patience, and by resorting daily to the closet, and patiently soliciting nature. Some professional men,—yes, men of the best abilities—recommend to the habitually costive a pill every day before dinner, or every night at bed-time. Nothing can be more false in principle, or more injurious in practice than this. It deserves the severest reprobation, and is a proof how far astray able medical men will sometimes go. I do not believe there is any case of removable costiveness which will not be conquered by the

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1. The internal surface of the intestinal canal is furnished with a vast number of glands, and Dr. Carpenter makes the following instructive remarks on their important uses (*Physiology*, page 431)— "There is strong reason to believe that the function of the numerous glands which beset the walls of the small intestines, and which are known as Brunner's and Peyer's glands (after the names of their discoverers), is purely excretory; and that they are destined to eliminate putrescent matters from the blood, and to convey them, by the readiest channel, completely out of the body. That the putrescent elements of the faeces are not immediately derived from the food taken in, so much as from the secreting action of the intestinal glands, appears from this consideration—that faecal matter is still discharged, even in considerable quantities, long after the intestinal tube has been completely emptied of its alimentary contents. We see this in the course of many diseases, when food is not taken for many days, during which time the bowels are completely emptied of their previous contents by repeated evacuations; and whatever then passes, must be derived from the intestinal walls themselves".

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use of the water-closet every morning, giving plenty of time there for the bowels to act, together with a recourse to a laxative diet, friction, and exercise. The daily use of an aperient pill is apt to produce spasm, flatulence, and many of the worst symptoms of indigestion. Let the patient go to the water-closet regularly after breakfast every morning, and make use of a good deal of friction over the bowels while there, and stay till some movement is effected, and if this habit is acquired, few indeed will complain of want of success. Of course if the stools are scanty from valvular disease of the heart, a large motion can never be expected, but this habit will still be of great service, as assisting in the regular exoneration of the bowels without medicine. Aperient medicine *is peculiarly injurious in constipation from valvular disease of the heart.*

The powder of ipecacuanha is sometimes of service in the present disorder, and scarcely any medicine is so appropriate, since it is peculiarly well calculated to stimulate the digestive organs, and relieve the weakness upon which the constipation is generally dependent, at the same time that it relaxes the bowels and skin. I know no case in which it will fail to be beneficial, while in numerous instances, even when of long standing, it must prove of essential utility. Half a grain of the best ipecacuanha powder may be made into a pill with three grains of Castile soap, and taken before dinner and supper; or, one pill may be taken before dinner, and two every night at bed-time. This remedy has considerable effect in removing a dry, harsh state of the skin, and in curing cutaneous eruptions.

The *alkaline tincture of rhubarb* also is an excellent medicine in costiveness. It is made by infusing an ounce of rhubarb, grossly powdered, in a quart of the alkaline solution, (page 2), which after standing for a day or two, and being well shaken together several times during that period, is fit for use, when filtered or poured off clear. One tea-spoonful of this tincture may be taken every night at bed-time, in a tea-cupful of thin gruel, barley-water or fresh small beer. I found it of eminent utility in regulating the bowels of a gentleman residing in Hampshire, who had long been most severely harassed by costiveness, flatulence, pains in the lower belly, and

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other painful feelings dependent on a want of proper tone and action in the intestines. He used double the quantity of rhubarb ordered above.

The compound tincture of benjamin is one of the most valuable medicines which can be used in those cases of constipation in which the *coecum* and *colon* are much affected. In chronic inflammation of the mucous membrane of those parts it is of great service, in the dose of half a drachm, twice or thrice a day, rubbed up with a wine-glassful of mucilage of gum arabic and water in equal proportions.

When people will take physic, the aperients employed should be warm, aromatic, and very mild in their operation, but I advise their rejection altogether. The form of pill is generally by far the best for such persons, and if the means previously recommended fail, either No. 97, 100, 100A, or those prescribed at pages 191, 193, may be resorted to with advantage. Of laxative medicines, two of the best are sulphur, and the common Seidlitz powders. About a tea-spoonful of sulphur, and somethingless than half a tea-spoonful of cream of tartar, mixed with a little treacle, is a proper dose. The Seidlitz powders, and the powder, No 130A, page 196, are valuable in this complaint, because they operate in an unusually mild manner, and correct acidity in the stomach, without increasing their tendency to costiveness after their operation is over. The *Beaume de Vie* is a good medicine. Another very mild and valuable medicine is the *Mixture for Constipation and Acidity,* No. 23, in my volume *On Infancy and Childhood.*

In all cases of constipation purgatives must be avoided, for though they relieve the bowels for the time, their irritation invariably induces still greater weakness in the intestinal canal, which occasions more obstinate costiveness, and thus in reality aggravates the evil they were intended to remove.

In point of diet, great attention should be paid in avoiding all articles that are astringent, and in indulging moderately in those which are relaxing. Generally speaking, the patient will find that excess of diet will increase the costive habit, by disordering and still further weakening the bowels. The constant use of brown

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instead of white bread is a measure that will frequently overcome this habit, when aperient medicine is resorted to with only partial and unsatisfactory, benefit; and if, after a time, it should lose its effect, it may be alternated with bread make of one-third or one-half rye flour, mixed with the wheaten flour. Barley bread also has considerable effect in promoting a soluble state of the bowels, and so has barley-meal porridge. It is easily digested, and very wholesome. The self-acting clyster machine will likewise be a useful instrument in such cases for occasional use, and a little soap dissolved in warm water is, perhaps, the best fluid that can be thrown up. Active exercise in the open air should be freely employed, with daily friction over the region of the stomach and bowels. The hand alone may be used, or with either of the liniments at page 161.

A constipated habit of body is a fruitful source of many complaints, as piles, fistula, strictures of the rectum, general debility, lowness of spirits, head-aches and various other evils. The bowels are organs so sensible and important, that it should never be forgotten, that habitual constipation necessarily produces disorder, and disorder leads to disease; and the correction of this habit, therefore, deserves far more attention from the subjects of it than it commonly obtains. The most pleasant and effectual way of correcting it is by *draughts of cold water,* diet, friction, exercise, and the occasional use of the lavement or clyster machine, if necessary; but I believe it will be seldom requisite. It is an unwise and unsatisfactory plan for the constipated to trust chiefly or altogether to the frequent use of aperient medicine; this now and then interposed is sometimes of great service, but the relief gained by cold water, a vegetable and fruit diet, friction, and the occasional employment of the clyster machine, is more certain, permanent and beneficial. Twinberrow's *Injection Apparatus* is excellent for giving an enema, *see* page 146, and probably to be preferred to all others for all ordinary occasions.

If the state of the stomach does not forbid it, a little wholesome ripe fruit, as strawberries, raspberries, pears, or baked apples or pears, etc., should be taken frequently.

The means above recommended are certainly very useful, but I must do the cold *water system* (See *Appendix)* the justice of saying,

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that it is far more effectual in curing this habit than any thing else I have ever employed, or known to be used. A wet compress must be worn over the bowels night and day, and the patient should drink one tumbler of cold water before breakfast, and one every night at bed-time. All aperient medicine must be abandoned. I am quite certain the most obstinate cases of constipation may be *cured* in this way, having witnessed such results repeatedly.

Very obstinate attacks of constipation may be successfully treated by the introduction of a large-sized gum elastic tube (called O'Beirne's instrument) through the anus quite up into the sigmoid flexure of the colon—that is, the *gradual, cautious,* and *slow* introduction of this tube through its whole length, (eighteen inches,) up into the bowels, when the syringe in common use in the enema apparatus is adapted to the lower and of the tube, and a quart of tepid gruel being previously prepared, and mixed with two ounces of castor oil, the whole is pumped up. As soon as the surgeon or nurse begins to pump up this injection, the patient will ordinarily express a desire to go to stool, and be very urgent to be allowed to do so after every succeeding one; but the effect will be rendered much more complete by not complying with his entreaties, and persevering until the necessary quantity is thrown up, when the tube is to be slowly withdrawn. The moment this is done, he will rarely fail to hurry to the night-chair, and discharge a copious, and, in many instances, an enormous stool.

An injection composed of extract of colocynth, infusion of senna and gruel, or warm water, or any ordinary purgative injection, may be used when gruel and castor oil alone are insufficient.

O'Beirne's *Enema Machine* may be got at Weiss's, No. 62, or at Watts' No. 68, in the Strand.

When the bowels are so obstinately confined as to resist the action of strong purgatives, and from the long continuance of the constipation, to excite alarm, other means must be immediately resorted to, supposing O'Beirne's *Enema Apparatus* not to be at hand. Dr. Willan, who is justly considered a high authority in practical medicine, has. some valuable remarks on this subject, in his reports on the diseases of London, under the head of Constipatio, which I would here insert.

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By the term constipatio", says he, "is expressed not merely costiveness, but a stoppage of the bowels from some original or local affection, as rupture, scirrhosity, or stricture of some portion of the intestine, narrowing and often obliterating the canal. Tumours and concretions, external to the bowels, have occasionally the same effect. Strictures take place in different situations; but they occur so frequently about the sigmoid flexure of the intestine colon, near its termination in the rectum (or last gut), that this part should be carefully examined in every case of a total obstruction of the bowels. The insertion of an unyielding tallow candle, though often practised, has generally been found painful and inefficacious. It is requisite for the propose to employ a bougie thirteen inches long, and of a proportionate strength; which should also be directed with a nice hand, by a skilful surgeon. I lately saw a lady thus relieved, who had been twenty-six days without any evacuation from the bowels, and who seemed nearly exhausted by violence of pain and distention of the abdomen, incessant vomiting, hiccough, cold sweats, etc. It is remarkable how long patients suffer under these distressing circumstances. In one instance, the time was twenty-nine days; in another patient, thirty-three days. As the latter recovered, after enduring every torture such a disorder could inflict, practitioners may be encouraged to persevere steadily in their attentions, and to retain some hopes even in the greatest extremity".

If O'Beirne's Bougie or Twinberrow's *Injecting Apparatus*, fail in affording relief, cold water should be freely and suddenly dashed over the patient's belly and thighs: and where the habit of body is strong and plethoric, bleeding from the arm will often be advisable. One, two or three drops of croton oil is sometimes a valuable purgative in cases of obstinate costiveness. It may advantageously be mixed with half an ounce of castor oil, and one drachm of spirit of turpentine, and two table-spoonfuls of water, by rubbing the castor oil with the yolk of an egg, then adding the cuoton oil, and lastly the turpentine.

Sometimes constipation is occasioned by a stricture, or narrowing of the rectum, or last intestine, and then it can never be removed but by removing this contraction, in the manner pointed out under STRICTURE. Many persons so circumstanced are harassed

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for years by costiveness, and its numerous painful consequences, without at any time gaining more than very partial relief, because their chief complaint, which is the contraction now referred to, has been altogether overlooked.

When a total obstruction of the bowels is accompanied with severe pain, and a hard quick pulse, it is generally dependent on inflammation, and must be treated accordingly by copious blood-letting, calomel and opium combined, cold applications, etc. Here the obstinate constipation can be removed only by removing the inflammations and although this is so clear a case, yet I have known, in several instances, respectable physicians dwell so entirely on the obstruction, to the neglect of the inflammation, which was its only cause, that the patients perished for want of recourse to the proper measures. I would, therefore, warn the reader against this fatal, and perhaps not very unfrequent mistake.

COW-POX

The genuine inoculated cow-pox is distinguished by the following signs : the vehicle produced is single and confined to the puncture; cellular; bluish-brown in the middle; fluid, transparent, and colourless to the last; concreting into a hard, dark-coloured scab after the twelfth day. If the fluid be not transparent, it forms a decisive proof either that it is spurious or imperfect.

The general progress of the disease is as follows:—The puncture disappears soon after the insertion of the lancet; but on the third day a minute inflamed spot becomes visible. This gradually increases in size, hardens, and produces a small circular tumour, slightly elevated above the level of the skin. About the sixth day, the centre of the tumour shews a discoloured speck formed by the secretion of a minute quantity of fluid; the speck augments in size, and becomes a manifest vesicle, which continues to fill and to be distended till the tenth day; at which time it displays in perfection the peculiar features that distinguish it from the inoculated small-pox pustule. Its shape is circular, sometimes a little oval; but' the margin is always well turned, and never rough or jagged;

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the centre dips instead of pointing, and is less elevated than the circumference.

In inoculating for the vaccine disease, the following circumstances should be carefully attended to.

First that the child to be vaccinated should be free from fever, and any eruption on the skin.

Second that the fluid should be taken between the fifth and ninth day.

Third that it should be perfectly transparent.

Fourth that if not used immediately, it should be dried gradually, and thoroughly, before it is laid by for future use.

Fifth that the punctures should be made as superficially as possible, and three punctures in each arm.

Sixth that any excess of inflammation that may arise should be repressed by the application of rag dipped in cold water or a cold lotion, as No. 68, page 173.

It is of the first consequence that vaccine lymph should be procured from the *National Vaccine Institution.* Pure vaccine lymph, taken at the proper period for vaccination, is amorphous and transparent. Examined by the microscope, it is found to contain no globules resembling those of either blood or pus.

If, in any doubtful case, the lymph, when so examined, is seen to contain any such corpuscles, it should not be used for the purpose of vaccination.

An important circumstance in relation to the mutual influence of the vaccine disease and other cutaneous affections, is the well-established fact that important varieties and modifIcations of the vaccine pustule are caused by herpetie and other eruptive states of the skin. Dr. Jenner, in a paper published in the *sixty-sixth number of the London Medical and Physical Journal*, points out the fact, that a single serous blotch existing upon the skin during the progress of the vaccine vesicle, may occasion such irregularity and deviation from the genuine course and character of the disease, that it cannot be depended on as a prophylactic against the small-pox infection. In a letter addressed by him to the medical profession generally,

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dated April, 1821, he observes : "I have found abrasions of the skin to produce the same effect—such, for example, as we find in the nurseries of the opulent, as well as in the cottages of the poor, behind the ears, and upon many other parts where the skin is tender. We find irregularity in the vaccine vesicle if the skin is beset with herpetic blotches or even simple serous oozings from an abraded cuticle. A speck behind the ear, which might be covered with a split pea, is capable of disordering the progress of the vaccine vesicle".

An attention to the following circumstances will enable us to distinguish the genuine from the spurious disease :

1. In the genuine cow-pox, little or no inflammation, except what occasionally arises from the mere puncture of the lancet, can be perceived until about the third day, and sometimes several days later. In the spurious affection, on the contrary, considerable inflammation and elevation of the skin at the punctured point, generally appears as early as the second day.

2. In the genuine disease, the small point of inflammation which appears three or four days after the matter is inserted, increases gradually until about the seventh day after its first appearance, at which time it is in its full state of perfection. In the spurious disease, the pustule arrives at maturity and finishes its course in a much shorter time. By the third or fifth day from the first appearance of the inflammation scabbing commences.

3. In genuine cow-pox, a beautiful circular and circumscribed areola almost always surrounds the pustule; and this areola efflorescence is usually in its perfect state about the seventh or eighth day. In spurious affections of this kind, an irregular superficial inflammation occurs on the first or second day after the appearance of the pustule; and the pustule itself appears more like a common festering sore produced by a thorn than a pustule excited by the vaccine virus.

4. The genuine pustule is perfectly circumscribed, with a flattened surface and a slightly depressed centre, and contains a colourless transparent fluid. The spurious pox is more elevated, not depressed in the centre, is irregular or angulated in its circumference, and contains an opaque, purulent matter.

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According to Dr. Willan, the vaccine vesicle is to be regarded as imperfect when : 1. though perfect in its form and appearances, it is without an aerola on the ninth or tenth day; 2. when the vesicle is very small, pearl-coloured, flattened, with a hard, inflamed and slightly elevated base, a dark red aerola, and without a rounded or prominent margin; 3. when the vesicle is small, pointed, with a very extensive pale red aerola. The spurious disease may be produced—1. by the genuine vaccine virus acting on a system affected with some cutaneous disease; 2. by vaccinating with matter which has undergone more or less decomposition by long keeping; 3. by vaccinating with matter taken from a spurious pustule; and 4. by the genuine vaccine matter being controlled or in some way diverted from its regular operation by idiosyncrasy or a depraved condition of the system.

It is rase that any medical treatment is necessary. If the constitutional indisposition should be severe or necessary. Troublesome a dose or two of James's powder, and of aperient medicine, as No. 73, page 176, is all that will be required. If serious symptoms arise, no medicine is equal to ammonia, as in No. 78D, page 181.

The value of cow-pox as a prophylactic or safe-guard against small-pox, is now pretty certainly ascertained, and is generally admitted by professional men. Cases of the latter disease occurring after vaccination have unquestionably happened, and will continue to happen, as more or less negligence will always be evinced by some in selecting the genuine virus, and in attending to the regular progress of the vesicle, and the other points of moment above noticed; besides which the vaccine fluid does not prove a permanent preservative in a few articular habits, of the nature of which, however, we know nothing.

It is now generally admitted that the protective power of vaccination in any individual, is impaired by time, and that it is probably still further influenced by the change which takes place in the system at the time of manhood. It is, therefore, expedient to renew it, and to re-vaccinate every person about the age of eighteen.

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CRAMP OR SPASM

The cramp is a sudden and rigid contraction of one or more muscles of the body, mostly of the stomach and limbs, which is vehemently painful, but of short duration.

The parts chiefly attacked with cramp are the calves of the legs, the neck and the stomach. When the muscles are affected, they feel as though they were puckered and drawn to a point or seem to be writhed and twisted into a hard knot; the pain is agonizing, and frequently produces a violent perspiration. If the stomach be the affected organ, the midriff associates in the constriction, and the breathing is short and distressing.

The usual *causes* are sudden exposure to cold, drinking cold liquids during great heat and perspiration, eating cold indigestible fruits, overstretching the muscles of the limbs, and the excitement of transferred gout. Impaired health and cold night air are common causes of cramp, and it is still a more frequent attendant upon swimming.

TREATMENT.—When it occurs in the limbs, warm friction with the naked hand or with a stimulating liniment, as No. 45, page 163, will generally be found to succeed in removing it.

Where the stomach is affected, a glass of brandy should be taken directly, and after that either, laudanum or tincture ginger afford the speediest means of cure. The following draught may be taken with great advantage.

Take of Laudanum	40	or 50 drops;
Tinture of ginger	2	drachms;
Syrup of poppies	1	drachm;
Cinnamon or mint water	1	ounce.

Mix, for a draught. To be repeated in an hour if necessary.

In severe cases, it will be advisable, at the same time, to apply hot flannels, either alone or moistened with the liniment, No. 46, page 163 ; and sometimes it may be found necessary to apply mustard poultices to the feet, which is often of great advantage. In

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the intervals, the patient should be particularly attentive to his diet, and to the regulation of the bowels, instructions for which will be found under the heads of INDIGESTION AND COSTIVENESS. When the cause is constitutional, warm tonics, as Nos. 102, 104 or 106, pages 196-98, constant exercise, and a free state of the bowels are the best remedies. Those who are frequently attacked with this kind of pain will derive great advantage from the use of the means pointed out under *Pain in the Stomach;* but since in such cases the chief cause exists in a derangement of the general health, the most valuable information will be found under *General Principles*, at page 345, and the best remedies will be those that most effectually tend to enliven, comfort and invigorate the patient.

In spasm of the stomach, bowels or limbs, frequently occurring, I would direct the reader's attention particularly to two things, *viz* : 1. To an enquiry whether there may not be habitually some error in diet, either as it respects quantity or quality; 2. If great costiveness is present, there may be accumulation in the colon, which is frequently the cause of spasms. Should diarrhoea occasionally come on in costive habits, we have an additional reason for suspecting torpor of the colon. Then purgatives of calomel, and extract of colocynth, as in the pill No. 97, page 191, must be given, and O'Beirne's Enema Syringe be used. *See* page 493.

In alarming cramp of the stomach from transferred gout, a large dose of brandy and opium, with mustard poultices to the feet, will frequently save the patient from impending death.

CROUP

The croup is a violent and peculiar inflammation of the membrane lining the windpipe, and especially the *bronchia,* producing a secretion of an uncommon plastic kind, which assumes a concrete and membranous form, and lines the windpipe through a part or even the whole. of its course.[1] It is attended with a peculiar ringing

1. "The false membrane of croup corresponds exactly with the form of the canals which it covers. Its thickness is usually somewhat greater in the larynx and trachea than in the bronchia, and varies from less than half a line to a line. Its consistence is about that of boiled white of egg; but this usually- diminishes

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sound of the voice, breathing permanently laborious and suffocative and fever. The essence of the disease consists in the secretion of this viscid and concrete lining, which is perpetually endangering suffocation.

Young children are chiefly subject to its attack, and those who have once had it are more susceptible of it than before, though the susceptibility gradually wears off as they grow older. It scarcely ever occurs after puberty. It sometimes terminates fatally within twenty-four hours, although when death happens, it more commonly occurs on the fourth or fifth day. In many cases the fate of the patient will be determined in twelve hours or even less.

The supervention of severe inflammation of the bronchia is the usual cause of death.

It commences usually with a slight cough, hoarseness, and sneezing, as though the patient had caught cold; to which succeeds, in a day or two, sometimes sooner, a peculiar shrillness and singing of the voice, as if the sound were sent through a brazen tube. In the progress of the disease, there is a sense of pain about the top of the windpipe, and a difficulty of breathing, with a wheezing sound in the inspiration, as if the passage of the air were straightened; the cough which attends is sometimes dry, and if any thing be spit up, it is a matter of purulent appearance, and sometimes films resembling portions of a membrane. There is a frequency of pulse, restlessness, and uneasy sense of heat; frequently a redness and swelling in the back part of the mouth, but sometimes no appearance of inflammation. The countenance exhibits great distress; the head and face are covered with perspiration from the violence of the struggles; and the lips and cheeks are alternately pale and livid. Many of the symptoms enumerated above may exist without much present danger, this being usually to be measured chiefly by the difficulty of breathing, and the state of the pulse. Hoarseness, a hard ringing cough, and a crowing inspiration may exist without

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towards its extremities, so that it becomes sometimes, in this situation, scarcely more solid than the thick phlegm of catarrh. It is of a white colour, with some times a shade of yellow, and is almost entirely opaque."—*Laennec on Diseases of the Chest*, p. 124, *third edition.*

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danger; but when the breathing is audible and difficult, and the pulse hard and frequent, accompanied with much fever, the case calls for the most vigilant attention, and most active treatment.

The preceding is the *first stage* of the malady; the second is denoted by a husky and suffocative cough, rather than one loud and sonorous; the voice is whispering; the respiration wheezing; the countenance pale; the eye languid; the pupils dilated; the tongue loaded and with purplish edges; the skin much less hot; and the stools dark and fetid. From this *second stage* of croup comparatively few patients recover. Should the disease advance to a fatal termination, the eyes become hollow; the countenance sinks; the extremities grow cold; the breathing becomes frequent, interrupted, and laborious; and great restlessness is manifested.

The power of swallowing is unimpaired.

Whatever tends to weaken the system or produce any degree of irritation in the lungs, may be considered to predispose to this alarming complaint; and it is, therefore, not difficult to account for the greater frequency of the disease in later than in former times, since the modern system of bringing up children is so much more sedentary and luxurious than that formerly pursued, and, therefore, more likely to weaken the organs of the chest, together with the general constitution. General weakness, no doubt, disposes to it; and it is certain, that all diseases originating directly or more remotely, in a delicate and irritable state of body, are greatly multiplied of late years. Cold is the principal exciting cause; and it is most frequent in winter and spring, in marshy situations, and near the sea-coast. It is probable that certain disordered states of the digestive organs materially assist in producing it. Particular families are severely affected by it, at which we cannot be surprised. It is not contagious.

There is a disease which often attacks the superior part of the wind-pipe, and especially of infants and children, which has so near a resemblance to croup, as to be very generally confounded with it : it is called *spasmodic croup* or *child crowing* by some authors, and *the acute asthma of infants* by others; and is described at page 480-81 ; but notwithstanding the resemblance of many of

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its symptoms, it is essentially different, and may generally be easily distinguished from it. The *acute asthma* comes on suddenly, and generally in the night; it is intermitting, the spasm subsiding in a short time, though it may return in an hour or two or less, but *in the interval the patient enjoys perfect ease,* although the voice is rendered hoarse from the previous straining. On the contrary, *the croup* very rarely commences abruptly, for it has usually the precursive symptoms of a slight cough and hoarseness for a day or two, and it commonly begins in the day-time; it is not intermittent, but when the inflammation has once taken effect, it becomes a permanent cause of excitement, and the anxiety and struggle continue with little, if any abatement, till the inflammation is subdued or death ensues.

Hysterics sometimes mimic croup. A young lady has been known to be attacked with a croupy cough, wheezing, uneasiness at the top of the wind-pipe, etc., which has deceived her medical attendant in the onset, but who on finding that blood letting, etc. was not applicable to the cure, has cured his patient with draughts of camphor and ammonia, with alteratives. The age of the patient is a material assistant here, in ascertaining the nature of the case, croup not occurring in adult age, and hysterics being as rare before puberty.

TREATMENT—The safest, most powerful, and most speedy remedy in croup is the TARTAR EMETIC; all other means are very unsatisfactory when compared to it. Therefore, I advise an *immediate* recourse to the tartar emetic, which should be given to children as young as two or three years, in half-grain doses, (in water,) every half-hour, tull full *vomiting* supervenes. When the vomiting has subsided two hours, the tartar emetic should be recommenced and continued as before, and thus we may continue to treat the patient till the disease is evidently arrested in its progress, when it may be continued in the smaller doses of a quarter of a grain every two, three or four hours.

It is a common practice with medical men to give three, four, and even five grains of calomel at a dose, and to repeat it frequently even to very young children; but this is unnecessary, and is certainly

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attended with danger; for, in several instances, the inflammation of the wind-pipe has suddenly given way under the employment of such large doses of the mineral, and has been immediately followed by a violent inflammation of the bowels, which has proceeded to a fatal termination, in spite of every remedy that great skill and experience could suggest. In this disease calomel in any quantity cannot be depended on. *Tartar emetic* is worthy of all confidence alone; the addition of calomel, except as a purgative, is altogether unnecessary, and would therefore be bad practice. One powerful efficient remedy is better than many inferior and uncertain ones.

A local warm bath should be instantly applied, and even when the disease is intense, Dr. Graves says:

"The disease may be arrested in its progress by the adoption of the immediate application of hot water in the following manner : A sponge about the size of a large fist, dipped in water as hot as the hand can bear, must be gently squeezed half dry, and instantly applied under the little sufferer's chin over the larynx and wind-pipe," (that is, at the top of the throat); "when the sponge has been thus held fur a few minutes in contact with the skin, its temperature begins to sink; a second sponge heated in the same way should be used alternately with the first. A perseverance in this plan during; ten or twenty minutes, produces a vivid redness of the skin over the whole front of the throat, just as if a strong mustard poultice had been applied; this redness must not be attended or followed by blistering of the skin. In the meantime the whole system feels the influence of the throat treatment; a warm perspiration breaks out, which will be encouraged by warm drinks, as whey; weak tea, etc., and a notable diminution takes place in the frequency and tone of the cough, while the hoarseness almost disappear, and the rough, ringing sound of voice subsides along with the difficulty of breathing and restlessness in short, all danger is over, and the little patient again falls asleep, and awakes in the morning without any appearance of having recently suffered from so dangerous an attack. 1 have repeatedly treated the disease on this plan, and with the most uniform success. It is, however, only applicable at the very onset of the disease, but it has the advantage of being simple, efficacious, and easily put in practice, and it's effects are not productive of the least injury to the constitution".

Very copious general bleeding at the commencement of the

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attack leas occasionally carried off the disease at once, but leeches will usually be found to answer best in infants.

The bowels should be opened early by the exhibition of an active purgative, such as three grains of calomel with ten grains of rhubarb.

Blistering is of doubtful advantage, and I would never torture a child by resorting to it in the active stage of this complaint. After the violence of the symptoms has been subdued by the foregoing means, a blister is likely to be serviceable as an assistant in perfecting the cure, and making it permanent. But it should never be applied on the throat. The best place is on the nape of the neck or the pit of the stomach.

M. Jadelot, whose opportunities of treating this fatal disease have been very numerous, as senior physician to the Hospital for children in Paris, employed most frequently in its treatment bleeding by leeches and emetics. Emetics alone in his practice have often been sufficient to stop the disease, especially in weak, pale or bloated subjects; but in stronger children, he orders the application of leeches, and allows the blood to flow until the child becomes pale, and the pulse loses its strength. After bleeding he causes vomiting several times in succession, as ordered above; and the practice is said to be attended with the greatest success, relief being very apparent after each vomit. This is the course M. Jadelot pursues in almost all cases, whether he is called early or not till the second stage of the malady, and likewise when the disease is very rapid. The emetic he appears to prefer is a combination of infusion of seneka with the emetic tartar and squills. In reality the emetic tartar does the business. Now and then the medicines may fail to excite vomiting, when the back part of the throat (*pharnyx*) should be irritated with a feather.

When the fits are alarmingly severe, with spasm and threatened suffocation, nothing is of so much service as the *tartar emetic.*

After the first and acute symptoms have been conquered, to relieve the febrile symptoms, the mixture No. 81, page 183 or the

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draught No. 24, page 153, may be given as there directed. The tincture of digitalis, in the close of five or six drops every four hours, has been recommended as being very serviceable, but it is not to be depended upon at the height of the disease; when the patient. is recovering, it may sometimes be a useful assistant. The decoction of seneka will likewise be a valuable medicine in some instances, at the same period. It has seemed powerfully to assist the separation of the membranous concretion within the windpipe. *See* page 112.

If the pulse becomes fuller, more steady, and less frequent, the breathing freer, and less hurried, the peculiar sound of the voice and cough begin to wear off, and the patient appears less anxious and oppressed, the prognostic is good; but we cannot with certainty rely on the favourable change till the remission has lasted a considerable time; for, after the most favourable appearances, the disease has returned with greater violence, and proved fatal. It is, therefore, of the utmost importance that the means of coure should not be abandoned too early. The practitioner should be particularly on his guard where the patient, though he may have obtained a great freedom in breathing, still remains dejected and oppressed.

When symptoms of dejection and exhaustion supervene, after the disease has been subdued by the preceding means, small doses of ammonia and camphor, as in No. 79, page 181, may be administered with good effect.

Should the disease have been subdued by the use of the means above recommended, the utmost attention to the diet and regimen of the patient is absolutely necessary for many days. Now and then the alarming symptoms will return in full force, and then the medical attendant has to begin again with bleeding and emetic tartar, as if he was treating the malady for the first time.

When all the foregoing means prove unsuccessful, and the difficulty of breathing greatly increases, it has been recommended by some practitioners to make a small opening into the windpipe, in order to prevent suffocation. This operation, which is called

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tracheotomy, is by no means formidable in very skilful hands; it may be done in a few minutes, and in extreme cases it is said to have saved the patient from impending death. I doubt, however, whether it is applicable to croup; it is certainly called for in extreme cases of inflammation of the larynx. Dr. J. Cheyne's remarks (*Pathology of the Larynx and Bronchia,* p. 41, 1809), which are unfavourable to the operation, are undoubtedly just.

The diet during the inflammatory stage should be very spare, and consist only of farinaceous decoctions, as thin gruel, toast-water, etc.

Croup has become a frequent complaint of late years, but is by no means so common as some people suppose, a deep-croaking cough, and the infantile acute asthma, (which is a spasmodic complaint), being often mistaken for it. The best means to prevent a recurrence of this disease in those who have been attacked with it, and to ward off its occurrence in those who appear disposed to it, from family make and constitution or other causes, are *the use of a good air, and plenty of it daily,* tonic medicines, as No. 78A or 78D, pages 180-81, the cold bath or sponging, a nutritious diet of easy digestion, a strict attention to the state of the bowels, active exercise and guarding against taking cold.

Croup now and then assumes a chronic character, and runs on for many days or even weeks. In such cases, the most effectual remedies are an occasional antimonial emetic, blisters on the chest or between the shoulders, a spare though nurtitious diets and *plenty of good country air*—the patient must be taken daily into the air. When the croup fits occasionally return during several weeks or months, and the foregoing means fail in preventing their recurrence, assafoetida will sometimes remove them entirely.

CUTS

Generally speaking, all that is necessary to be done in case of incised wounds or cuts, is to clear away the surrounding blood, with all extraneous substances, and then to bring the lips of the wound neatly and closely together, retaining them in that position by slips

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of adhesive plaster, spread on linen; and if the cut be deep and extensive, supporting it and the surrounding parts by a bandage.

In large wounds, interstices should be carefully left between each of the slips of plaster, to facilitate the escape of secreted matter or effused blood. The first dressings should remain on untouched for three or four days; and if much pain or inflammation follows the accident, a little of the aperient mixture No. 73, will be advisable, with the pill No. 98, page 191, every night, and a spare diet.

The bleeding consequent upon wounds may generally be stopped by pressure and rest, which is the best mode. The application of cobweb may, however, be resorted to, and is sometimes useful in obstinate bleeding from cuts.

Formerly, it was the common practice of surgeons to sew up long or deep wounds with the needle, but this is now rarely done, and may almost always be avoided. 'The lips of the most severe cuts can generally be retained in contact much better, and with far less irritation, by means of adhesive plaster and a bandage, than by any ligature.

In cuts which nearly separate any particular member of the body, a finger for example, a union by the foregoing means ought to be invariably attempted, and will usually succeed if the attempt be made without delay. It is well known that even the nose, after being nearly or quite separated from the face, has been perfectly united to it again by means of strips of adhesive plaster.

For slight cuts with a knife or any other sharp instrument either the Riga balsam or Friar's balsam is an excellent application. It usually stops the bleeding immediately.

In case of a cut that penetrates to, and divides an artery, the tourniquet must be immediately applied a little above the injury, until the assistance of a skilful surgeon can be obtained. If a tourniquet is not at hand, a hard conical compress should be made, and fixed over the seat of injury, the conical point being placed as near as possible over the mouth of the bleeding vessel. In defect of any thing better, a conical compress may be made with farthings, half-pence, and penny pieces, arranged and bound up in a piece of linen.

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DEAFNESS

By deafness is usually meant a total inability of hearing or distinguishing sounds; but in this place that term will also include hardness of hearing, in which this faculty is so diminished, that articulated sounds can be heard only with considerable difficulty or with the assistance of a particular apparatus.

Deafness most commonly originates either from some organic defect or impediment or from local debility or relaxation.

The organic defect may exist in the outer or inner entrance or in the cavity of the ear. The outer entrance has sometimes been closed by a preternatural membrane, which may be situated either superficially or deep in the external cavity of the ear; sometimes it has been blocked up by indurated wax, insects or other extraneous substances. Obstruction of the Eustachian tube is often a cause of a considerable degree of deafness; or it may arise from ulceration or some other affection of the tympanum or drum of the ear; or from an insensible state of the auditory nerve or of the surfaces on which its filaments are spread. If the defect exist in the internal cavity of the ear, its precise nature can seldom be known during life, and if known, would rarely admit of a remedy.

Deafness dependent on local debility or relaxation, may be induced by a cold, a long exposure to loud and deafening noises, various fevers, and inflammations, rheumatism, head-ache and repelled cutaneous eruptions.

TREATMENT—The particular plan of treatment to be pursued will depend on the nature of the cause giving rise to the deafness, and must, therefore, vary considerably in different cases; and the exercise of great attention will frequently be necessary in order to ascertain the real nature of the case. Children are sometimes born with a preternatural membrane, which closes the external opening of the ear, and then this membrane must be carefully divided with a small knife, the flaps be cut away, a tent of a suitable size be introduced into the opening, and the wound be thus kept constantly dilated, until it be completely healed.

If the hardness of hearing be owing to the lodgment of indurated

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wax, the patient, besides his inability to hear, complains of noises, particularly a clash or confused sound in mastication, and of heavy sounds, like the ponderous strokes of a hammer. The most speedy and effectual way of removing the hardened wax, is by syringing the ear with warm water and soap, three or four times a day, until it is brought away. A large syringe, capable of holding six or eight ounces of water, should be employed for this purpose; and the evening before the syringe is used, a little sweet oil may be dropped into the ear.

Insects, and foreign bodies lodged in the ear, frequently occasion deafness, and sometimes give rise to extraordinary symptoms. Cherry-stones, peas or other small bodies, may generally be extracted by a pair of forceps, a little oil of almonds being first injected; and wormns or other insects are most certainly dislodged by introducing into the ear some bitter oil, which is fetal to these animals. One of the best oils for this purpose is an infusion of tobacco in oil of almonds.

The external passage of the ear is occasionally too narrow for the admission of a due quantity of the sonorous undulations, and the sense of hearing is of course impaired. If this depends upon malformation of the bone, it is manifestly incurable; but if it is owing to a thickening of the soft parts within the passage, great good may in general be gained by gradually dilating the passage with tents, which should be increased in size from time to time; and lastly, making the patient wear, for a considerable period, a tube, adopted to the part in shape. Sometimes it may be advisable to inject into the passage a strong solution of lunar caustic, in order to produce a detachment of the thickened portions of the skin. Mr. Earle of London, cured a patient of hardness of hearing depending on a narrowness of the external passage, by the solution of lunar caustic.

Sulphuric ether has been declared to be very efficacious in the cure of deafness (see *Bulletin de Therapeutique,* 30 April, 1860). From four to eight drops are to be daily dropped into each ear of children, and double the quantity into the ears of adults.

Deafness, depending on an eruption of small ulcers affecting

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the external passages of the ear, is, for the most part, curable. In such cases, the ichor, which exudes, from the pores of the ulcerated surface, thickens in the passage, and not only obstructs the entrance of sound, but is accompanied with a great degree of fetor. Here the alterative pill No. 98 or 99, page 181, should be given every ether night, and the ear be injected, once or twice a day, with the lotion No. 70, page 174 or with a lotion made by dissolving four grains of bi-chloride of mercury in a pint, of lime-water. The ointment No. 89, page 188, is also a useful application. Sarsaparilla and small doses of bi-chloride of mercury given internally are an admirable remedy. *See* page 15.

I know an old woman who was cured of deafness by having salt, first well dried, blown into her ears.

When deafness originates from disease of the tympanum or cavity directly under the drum of the ear, there is usually a discharge of pus, and the treatment is the same as advised in the last paragraph. In this state blisters or setons behind the ear or between the shoulders, may also be advantageously employed.

Obstruction of the Eustachian tube, which runs from the back part of the mouth into the internal cavity of the ear, is often a cause of a considerable degree of deafness; because it is necessary for perfect hearing, that air should be conveyed from the mouth through this passage into the cavity of the tympanum, which now can no longer happen. When this tube is obstructed, the patient cannot feel the drum crackle, as it were, in his ear, on blowing forcibly with his nose and mouth stopped. Previous ulceration or disease of the throat, will assist us in ascertaining the nature of the case, since it generally arises from ulceration in the superior part of the throat or from a very severe cold. The most effectual remedy for this kind of deafness, consists in making a small puncture in the membrane of the tympanum. Sir Astley Cooper first recommended this operation, and he resorted to it successfully in several instances.

Nervous deafness is accompanied with various complaints in different cases;—noises in the head of sundry kinds, the murmuring of waters, the hissing of a boiling kettle, rustling of leaves, blowing of wind, etc. Other patients speak of a beating noise, corresponding

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with the pulse, and increased by bodily exertion, in the same degree as the action of the heart. The treatment proper in nervous deafness, consists in administering tonic medicines during the day, as No. 102, 103 or 115, pages 196, 202, together with a mercurial alterative at night, as No. 99, page 192, and occasional aperients. If the patient be of a spare habit, the aperient pill, No. 100, 101, 101A or B, will be most proper; if of a full habit, the draught No. 27 or 28, pages 155-56, should be preferred. A blister should likewise be applied behind the ears, once in eight or ten days, and electricity is in some cases very useful. Electricity is considered hurtful by most writers, when the patient is very irritable, and subject to vertigo, bleeding from the nose, and great determination of blood to the head. The fumes of tobacco have sometimes been perfectly successful in this and other kinds of deafness. They are to be drawn into the mouth, and forcibly pressed against the Eustachian tubes by closing the lips and nostrils, and then urgently sniffing the vapour upwards to the palate. The late Mr. Grosvenor, an eminent surgeon at Oxford, is said to have been cured of severe deafness by the use of tobacco smoke.

Glycerine has been very strongly recommended by Mr. Wakley, surgeon to the Royal Free Hospital, London, for that particular kind of deafness arising from a thickening of the passage *(meatus)* down to the tympanum or drum of the ear. In this case there is a greater or less degree of deafness, corresponding with the amount of thickening; cessation. of the secretion of wax; and frequently singing or hissing in the ears. In applying the *Glycerine,* the *meatus* or external opening of the ear is to be well cleansed with tepid water by means of cotton used with the forceps. Mr. Wakley says—*Lancet,* 15th May, 1852, p. 467.

"The *Glycerine* is now poured into the ear, and a plug of gutta percha, softened in boiling water, made to fit the external opening; this takes the exact form of the ear, becomes hard, and effectually prevents either the entrance of atmospheric air or the exit of the glycerine. The ear should be examined daily, and the same process repeated. The lining membrane can be examined with a blunt silver probe, passed gently through the speculum auris, to ascertain the effect of

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the glycerine upon the articular thickening. The *meatus* or opening; will gradually lose its shining pearly appearance, and softened pieces will fall off, and can be removed either by the forceps or gently syringing. The practitioner should never attempt to tear them away, but allow them to come away by the means just stated. The treatment occupies ordinarily from two to four weeks, and is generally without pain or inconvenience of any kind to the patient, and the results, in some cases, have been very gratifying."

Galvanism is sometimes useful; or the magnet may be tried, as recommended under CHRONIC RHEUMATISM. I have lately heard of a person who derived great benefit from the use of the magnet.

Polypus or fungous excrescences in the ears, will sometimes bear to be remove by ligature or the knife, but great caution is necessary in resorting to these measures.

Mr. Abernethy thought diseases of the ears require a soothing plan of treatment, and he was, therefore, averse to any experimental or irritating measures. He believed deafness might often be relieved by improving the condition of the digestive organs, and relates, that a gentleman applied to him for what he thought a syphilitic affection; Mr. Abernethy assured him it was no such thing, and recommended attention to diet and regimen, with five grains of blue pill, to be taken every other night, and a pint of compound decoction of sarsaparilla, in divided portions, in the course of the day; by these means, besides being freed from his disorder, he was cured of a great portion of habitual deafness. Undoubtedly deafness is often dependent on deranged health, and the remarks made under GENERAL PRINCIPLES, page 338, are worthy of attention.

DELIRIUM TREMENS (*Brain Fever of Drunkards*)

This complaint is characterised by general inquietude, tremor, continued watchfulnas cool moist skin, perspiration, delirious loquacity and illusion. It occurs only in *habitual* drunkards, and in such as are addicted to the inordinate use of opium or other narcotic stimulants. So long as the customary quantity of the stimulus is taken, the disease seldom, if ever, supervenes, but if from necessity

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or a temporary disgust, the ordinary stimulating potations are suddenly left off; or greatly diminished, then the activity of the brain becomes morbidly increased, and mental disorder, in many instances, speedily ensues.

The principal *symptoms* are want of appetite, nausea, and vomiting, giddiness, a sense of confusion in the head, want of sleep, an anxious expression of the countenance, and tremor of the hands. Then the patient exhibits an expression of alarm and suspicion, the eyes are cast about with quick and scrutinizing glances or apparently fixed upon some particular object; the tremor of the hands increases; the patient becomes irritable, and sometimes irascible; he is extremely restless, walks continually to and fro, and is unable to obtain a moment's sleep. After this follows mental disorder, loquaciousness, and a continued succession of various alarming, disgusting, and ludicrous *apparitions*. He fancies he sees dogs, snakes, cats, mice and other animals in his room or that various persons have entered his room for the purpose of robbing killing or annoying him; and to avoid these he runs to the door to make his escape or to the window to leap out, and sometimes raves violently. He often starts with terror and agitation.

The pulse varies considerably in different cases, being sometimes hard, full and frequent, but much more frequently soft, full and quick, without strength or tension. The tongue and skin are moist, the urine abundant and the pupil dilated. The bowels are usually torpid, with an entire loathing of food throughout the whole course of the disease.

TREATMENT—Tincture of digitalis, tartar emetic, opium and tincture of hops are the sheet, anchors in this disease. They afford a gentle support to the brain, quiet nervous disturbance and favour the return of sleep—the grand desideratum. In many cases, the patient must *sleep or die*. Let a black draught be given immediately, with a pill, composed of two grains of calomel, and four of compound extract of colocynth. Its free operation generally sensibly relieves the patient, particularly if young and of a full strong habit. In weakly subjects, half the above quantity of the purgative will be sufficient or a table-spoonful of castor oil may be given instead.

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Should the patient be young and robust, cold cloths to the head, and active purgatives are essential, and perhaps twelve leeches to the head; but in old, debilitated and confirmed drunkards, these means would not be advisable, but digitalis or opium should be given at once, together with a mild aperient. Give two grains of opium every two hours, to be continued until sleep ensues. Should opium induce a contraction of the pupil, it must not be repeated. If opium particularly disagrees with the patient's habit, half an ounce of tincture of hops may be given every two hours, alternately with the opium, when, after one, two or three doses, the patient is found susceptible to the influence of the narcotic, the interval of its administration should be lengthened to four hours or more or the quantity diminished—or tincture of digitalis would probably be better still. Upon his awaking from the first sleep, should the least tendency to wandering or incoherence remain, the medicine is to be given in smaller quantities so as to control this tendency.

Tincture of digitalis has been strongly recommended as having been, in many instances, effectual in sending the patient to sleep, after opium had failed. Half a drachm or a drachm may be given in water, every two hours, till sleep is induced.

Sometimes the debility is so great, that the moderate use of opium alone is not sufficient to counteract it, and there is danger of fatal prostration, unless the patient receive further support. In such cases a little malt liquor or wine must be allowed, such as a quart of ale or porter or four or five glasses of good wine in twenty-four hours. In extreme cases of exhaustion, a little brandy may be necessary to sustain a due strength of pulse.

To obviate excessive tremors and tendency to convulsion, nothing is equal to sesqui-carbonate of ammonia, (No. 79, page 181). Ammonia is a most valuable remedy in this complaint, and should never be neglected. Musk is also recommended, and sal volatile or what is better, two or three drachms of compound spirit of sulphuric ether, and two drachms of assafoetida, in water, every two hours.

Irritability of the stomach may be relieved by lime water and milk, effervescing draughts, soda water, sal volatile, and a mustard

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plaster or blister to the pit of the stomach; and should opiates be rejected from the stomach, they may be administered in double the quantity by the rectum.

In very obstinate cases of sleeplessness, which resist tire usual measures, and persist for a week or more, a blister over the whole scalp sometimes has a very happy effect or a linen bandage wet with the coldest water may be applied to the head, and be frequently renewed. When the disease has long resisted opium, sleep has repeatedly been induced by inhaling ether. Another *admirable remedy* to procure sleep is Dr. Graves's mixture, No. 87B, page 187, the quantity of laudanum ordered being doubled. *See* also page 370.

The best diet ordinarily is broth, egg and wine, farinaceous substances, milk punch and a little animal food.

I am a decided enemy to blood-letting in this malady. Cupping will be useful if the patient is young and of vigorous constitution, and there exists much vascular turgescence of the head, and a state of delirium approaching the raving of *phrenitis* or inflammation of the brain.

DIABETES

Diabetes is a considerable discharge of urine, for the most part excessive, of a violet smell and sweet taste, and attended with great thirst and general debility.

It often makes its approach insidiously, and may arise to a considerable degree, and exist for some weeks without being particularly noticed. It is attended mostly with a most voracious appetite; an insatiable thirst; a dry harsh skin; a white and foul tongue, sometimes unnaturally clean and red; depraved taste, a sense of weight or even acute pain in the loins; and frequently with a hay-like scent or odour in the breath, and issuing from the body. The kidneys discharge a fluid usually very limped and large in quantity, though sometimes tinged with green, like a diluted mixture of honey and water, and possessing a sweet taste more or less powerful; the pulse is quicker than in health; the flesh

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wastes rapidly; and in a very advanced stage of the disease, the feet and legs swell, and the skin becomes cold and damp. A troublesome costiveness frequently attends, and often disease of the lungs.

The quantity of urine evacuated by diabetic patients is generally profuse, and in some instances, has amounted to the astonishing increase of sixteen or twenty quarts in twenty-four hours.

This disease is occasionally to be met with in early life, but generally occurs at a more advanced period, especially in constitutions broken down by intemperance. The *predisposing* and *exciting causes* are chiefly such as debilitate the general system, as the abuse of spirituous liquors, cold applied to the body, immoderate evacuations, crude unwholesome diet, and the excessive use of mercury. It is most frequently met with in men, and it seems to prevail in particular families.

Medical men differ respecting the *immediate cause* of diabetes, but the most general opinion is, that it is dependent upon a morbid action of the stomach and other digestive organs, which necessarily, therefore, constitute its real seat. This is the opinion of the present author, who, however, conceives the explanation to be incomplete without admitting the existence of a peculiar condition of the kidneys, and more especially of the blood.

The *distinguishing sign* of diabetes is the presence of sugar in the urine. Every excessive urinal flow unaccompanied by this symptom, belongs to or forms a different complaint, and is very generally the consequence of some nervous disorder or of a simple relaxation of the univerous tubes.

TREATMENT—The objects are *to restore the general health and digestive energies of the frame; and to diminish the quantity, and improve the quality of the secretion from the kidneys.*

The most successful plan of treatment hitherto discovered, consists in a strict adherence, both in regard to quantity and quality, to the most wholesome diet chiefly of animal food, together with regular exercise in the country, and the use of tonic, astringent and narcotic medicines, the most efficacious of which are the mineral acids, particularly the nitric,—lime-water,—bark,— ammonia,—

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whortle-berry powder,— preparations of steel and opium. Blood-letting also is sometimes advisable, but requires the exercise of a nice discrimination. In this disease, the animal salts are deficient in the urine, while sugar is secreted in considerable quantity, and these means are calculated to yield the former, and to counteract the latter, at the same time that they are capable of correcting the morbid action of the digestive organs.

Mercury in every form is decidedly injurious. Dr. Watson has known *creosote* useful and Dr. Barlow thinks highly of ammonia, and so does the present author.

The nitric acid is a medicine of great importance, as it is both tonic and astringent, and it has, in several cases of diabetes, been found to succeed alone. Dr. Gilby of Birmingham, relates instances of its success, and Mr. Earnest has given a striking proof of its value in the thirteenth volume of the London Medical Journal. It may be taken in the following way :

Take of Nitric acid ..... 1½ drachm;
Barley water ..... 9 ounces;
Simple syrup ..... 1 ounce.
Mix, and take two table-spoonfuls in the like quantity of water, three times a day, gradually increasing the dose to four table-spoonfuls.

The late Dr. Ferrier of Manchester, recommended a combination of bark, whortle-berry and opium, after having used it with success, and it is no doubt a useful formula.

Take of Yellow bark, in powder, whortle-
berry, in powder, of each ..... 1 scruple;
Opium, in powder ..... half a grain.
Mix. To be taken four times a day, in a glass of lime-water.

He recommends lime-water for the common beverage or distilled water may be used.

Opium is, in many instances, eminently serviceable, and has

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been most advantageously employed in large doses. It has the recommendation of many eminent physicians; and where it cannot be trusted to solely for effecting a cure, will often prove a valuable auxiliary to the other means employed to overcome the existing irritation. The purified opium may be administered in doses of from one to three, four or five grains, three times a day, either alone or in conjunction with the nitric acid, lime-water, bark or any other tonic. The opium in the foregoing prescription of Dr. Ferrier, may frequently be increased with advantage, from half a grain, to one, two or three grains.

For allaying the nervous irritability in this disease, Dover's powder is very appropriate. It may often be advantageously combined with a tonic, as a grain of quinine with four or five grains of Dover's powder, made into a pill, and taken thrice daily. Or six grains of the carbonate of iron, may be combined with the same quantity of Dover's powder, -and given in the same way.

I think sarsaparilla and pareira brava to be medicines likely to be of eminent service in some cases of this disease; and the vapour bath is much worthy of notice. The vapour bath often alters, not only the quantity, but likewise the quality of the urine. In one instance, the use of a vapour bath every second day, cured the patient.

Dr. Barlow says, *Practice of Medicine,* p. 537, "Most vegetables are objectionable, except the cruciferous plants; malt liquor is to be shunned, bread sparingly used, and potatoes and turnips not at all. Let the patient have for breakfast tea or coffee, with plenty of milk, a rasher of bacon, and a little toasted bread. For dinner, beef or mutton, game or fish, with greens or spinach, and Italian maccaroni boiled in milk. Let him drink a little brandy and water. He may have some tea, with a little well-toasted bread in the evening; and as he will want some supper, he may have a mutton chop with maccaroni or a mess of maccaroni and milk. Of medicines we know of none that have any certain control over the disease. Some years ago the author recommended the use of ammonia in considerable doses, and the remedy has certainly been found useful by the late Dr. Golding Bird, and others, as well as by the author.

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A few months ago the author received a letter from a medical practitioner who has long been suffering from diabetes. He said, "I attribute my recovery, under Providence, to the ammonia, the diabetic biscuits and a tranquil mind".

Whatever medicine is resorted to, daily friction over the region of the kidneys, with either of the liniments at page 163, should be persevered in at the same time; and in obstinate cases it will be advisable to try the effect of an issue made in that part.

Blood-letting has been strongly recommended in this disease by the late Dr. Watt of Glasgow, and is countenanced by other professional men; but it is not applicable to those cases which are the result of advanced years, and of a debilitated constitution. On the contrary, where the pulse is hard, and the pain urgent; where the constitution does not seem seriously affected, and the soundness of the stomach and other assimilating viscera are sufficiently proved, by the perpetual desire for food to supply the waste that is taking place, cupping on the loins may frequently be useful.

Dr. Baillie's sentiments on this disease merit attention.

> "I have in the course of my medical life", says he, "seen a good many instances of this formidable disease. Of late years, a considerable proportion of such cases have got well finder my care or have had the symptoms very much mitigated. The most successful plan of treatment has been to give considerable doses of opium combined with rhubarb or some other bitter; fifty drops of laudanum, for instance, may be given three or four times a day, mixed with some infusion of rhubarb or infusion of columba. The rhubarb may also be given separately, in the form of pills. Under this treatment, the disease will often gradually subside, and at length cease altogether. It is, however, very apt to recur, and therefore this plan of treatment, in more moderate doses, should be continued for some months after the patient is apparently well. Bleeding from the system generally, and topical bleeding from the loins are often useful; for the blood-vessels of the kidneys, in this disease, are generally more or less distended with blood. The diet should be temperate, and should consist chiefly of animal food; and the best kind of drink, is, upon the whole, Bristol water".—Dr. Baillie's *Posthumous Writings*, p. 220.

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For an account of the use of the Bristol Hotwell water in diabetes, *see* page 243-44. Malvern water is excellent.

Under the use of either of the preceding remedies, the diet should be almost strictly and perseveringly confined to small quantities of the most digestible animal food, combined with a little farinaceous matter. The Gluten bread made by Messrs. Van Abbott, 148, Fenchurch Street, London, is recommended by eminent physicians as extremely useful, and so is the almond bread and biscuits made by Hill, 61, Bishopsgate Street. Domes of Gower Street North, Euston Square, makes bran biscuits that are useful. Diabetes is generally an obstinate, and too often a dangerous malady; and an attention to this circumstance will be absolutely necessary in all cases, without exception. Distilled water, acidulated with phosphoric acid, appeases the urgent thirst. Claret is an excellent beverage for diabetic patients. Alum-whey or lime-water or animal broths, are useful for the common beverage; and the bowels should be kept regular by the pills No. 100 or 101 or 101D, pages 194-95 or by a little compound powder of jalap.

DIARRHOEA OR LOOSENESS

Diarrhoea is well known to be a complaint in which the evacuations from the bowels are crude, loose and too frequent, with little griping or tenesmus.

There are several species of the complaint, the principal of which are the bilious looseness, in which the faeces are of a bright yellow; the mucous looseness, characterized by a considerable discharge of acrid mucus; the milky looseness, known by the milky appearance of the stools; the lientery, in which the food is passed rapidly and with little change; the serous looseness, in which the motions are almost entirely liquid and limpid; and the yeasty looseness, remarkable for the sour smell, and the frothy, yeasty appearance of the evacuations.

In all the forms of this disease, the chief *immediate cause* of the diarrhoea is an increase of the natural peristaltic action throughout the whole or a great part of the intestinal canal, which

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may be produced by irritating materials thrown into the bowels by the mouth; by a diseased change in the fluids, which are naturally secreted in them; or by an irritable state of the intestines themselves or the membrane that lines their inner surface.

The principal *exciting causes* are the application of cold to the surface of the body, and especially the transition from a hot climate into a colder region; the sudden change from a cold to a hot climate; suppressed perspiration; acrid indigestible aliment; inertness or turpitude of the glands of the intestines; the abuse of active purgatives; worms; and a diseased condition of some part of the intestinal canal.

The diarrhoea produced by sudden cold is commonly of the acrid mucous character; while that caused by a transition from a cold to a hot climate is in general the bilious looseness; and that remarkable for the yeasty appearance of the motions, is almost invariably the consequence of positive disease in some part of the bowels, particularly the larger bowels.

The disease is *distinguished* from dysentery by being unattended either with inflammation or tenesmus; and by the appearance of the stools, which in diarrhoea are generally composed of some portion of the usual alimentary matter, white in dysentery, they are, for the most part, wholly destitute of it, and bloody.

TREATMENT—Generally speaking, ipecacuanha, both in the form of the simple and compound powder; simarouba bark; tormentil root; and alterative doses of calomel will be applicable, perhaps, to every species of diarrhoea, and will often be eminently serviceable. The following combination of ipecacuanha and simarouba bark will be found a powerful remedy.

Take of Ipecacuanha, in powder ..... Three-fourths of a grain;
Infusion of simarouba bark ..... 1 ounce.
Mix for a draught to be taken three times a day.

In numerous cases nitric acid and opium, combined with infusion of gentian, will be still more efficacious. Dr. Abercrombie

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and Dr. Hynes of Nottingham, have strongly recommended this prescription:

Take of Tincture of opium..... 1½ drachm;
Nitric acid,..... 20 minims or drops;
Compound infusion of gentian, sufficient to fill an eight ounce phial.
Mix, and take two table-spoonfuls after every liquid stool or painful evacuation.

That very skilful physician, Dr. George Fordyce, was partial to a union of ipecacuanha and tormentil root, which is certainly of great value, and applicable to looseness, whether recent or of long standing, and whether the result of simple debility and irritation in the intestines or of positive disease.

Take of Ipecacuanha, in powder ..... Three-fourths of a grain or a ..... grain;
Tormentil root, in powder,..... half a drachm.
Mix. To be taken in dill or common water, three or four times a day.

Three or four grains of the compound powder of ipecacuanha is also very useful, especially if combined with two or three grains of mercury with chalk, and a warm bath at ninety-seven or ninety-eight degrees, accompanying it with a flannel roller round the abdomen for a few days, which, when laid aside, should be carefully and gradually removed. These medicines may be made into a pill with a sufficient quantity of opiate confection, and repeated three or four times in twenty-four hours. All these medicines determine to the surface of the body, and thus relieve the internal parts; and the above prescriptions are likewise capable of giving tone to the intestinal canal. In obstinate cases of diarrhoea, especially if symptoms appear of any actual disorganization in the parts affected, the compound calomel pill No. 98 or 99, page 192, every night or every other night, will be advisable in conjunction with the above.

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In the *bilious* diarrhoea, a little calomel is usually necessary. Two grains, combined with eight grains of powdered rhubarb in jelly, will be a proper form for its exhibition; which should be followed by the administration of diluting and demulcent drinks, as infusion of linseed or quince seed, and decoction of sago, Embden grits or isinglass, with a little good brandy in it. The calomel and rhubarb may here be repeated for two or three days, and be succeeded by the compound powder of ipecacuanha if the looseness continue; or the patient may at once take two grains of mercury with chalk, (*grey powder*) and two grains of compound powder of ipecacuanha, twice or thrice a day, following it on the second day with a little castor oil. This plan will likewise be frequently of great service in the milky diarrhoea.

In the *lientery* or that species of diarrhoea in which the food is passed rapidly, and with little change, the most efficacious medicines are those which are capable of giving energy to the digestive organs, such as the tonics recommended under *Indigestion*, particularly infusion of columba, with nitric acid and opium; and rhubarb with ipecacuanha and ginger. The *alkaline tincture of rhubarb* (page 4) is a very useful medicine.

The first prescriptions above are among the most valuable in the *acrid mucous* diarrhoea, and in that of the serous description. And in that kind remarkable for the yeasty appearance of the stools, alterative doses of mercury at night, as No. 98, 99, pp. 191-92 with the ipecacuanha and tormentil powder in the day, and an occasional tepid bath at ninety-seven or ninety-eight degrees, are certainly some of the means which have been found most beneficial. This last species is of a very unfavourable description; but I am much inclined to think that the nitro-muriatic acid bath (*see* page 92-93), would sometimes be very useful.

A very peculiar kind of diarrhoea is occasionally met with, in which the patient voids, along with the excrement, whitish membrane-like tubes, which give to the unprofessional inspectors the idea of the internal mucous membrane of the bowels coming away. These tubes are a diseased secretion, and show a great degree of irritability in the bowels, and, probably, of slow inflammation.

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The faeces are mostly discharged with great pain, and of a small calibre. The balsam of capivi will be found eminently serviceable in this species, with which may be advantageously joined the pill, No. 99, page 192, every or every other night. The balsam may be taken in doses of thirty-forty or fifty drops, three tines a day, mixed with mucilage of gum arabic; and an injection of a pint of warm water, with a tea-spoonful of laudanum, should be thrown up once or twice a day. Emollient injections as No. 9, page 147, are also useful.

Beside the medicines already noticed as beneficial in looseness, the decoction of oak-bark, infusion of quassia, decoction of Iceland moss, alum and lime-water, have all been occasionally found very useful. They have been more especially serviceable in chronic or long standing diarrhoea, which ought to be removed by degrees, and require a strengthening medicine, which is, at the same time, astringent and tonic. In this protracted species, some persons have obtained much benefit from drinking about a pint of lime-water during the day, mixed with an equal quantity of milk, in which an ounce of gum arabic has been dissolved. It is likely to be generally useful in the diarrhoea of old people, and where there is positive disease in the bowels.

Should this complaint occasionally occur in persons of a costive habit, we ought to examine whether it is not owing to torpor or chronic inflammation of the colon or some part of the large interstines, with morbid accumulation there, for this may be a cause of diarrhoea—the bowels being sometimes relaxed, while concretions often remain behind, notwithstanding that the patient is at times harassed with spontaneous purging. In this case, the means pointed out under *Costiveness* will be the most effectual.

For an excellent remedy in the diarrhoea of the consumptive *see* page 472.

When this complaint makes its attack with great foulness of the stomach or follows excess in diet, it is frequently advisable to commence the treatment by administering an emetic of twenty grains of ipecacuanha powder; but the calomel and rhubarb previously noticed will usually remove this foulness of stomach.

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Diarrhoea is extremely common in infants and children, especially from the commencement of teething or the time of weaning to the third year. If it occurs at the period of weaning, the stools are usually greenish, watery or slimy; sometimes ash-coloured, and attended by griping pains, often by retchings and vomiting, with symptomatic fever. Sometimes they are pulpy of a clayey colour, and very offensive. Here, in general, the best treatment consists in giving a grain or two of calomel, following it directly with a dose of castor oil, if matters appear accumulated in the bowels; if not, give three grains of mercury with chalk, three grains of calcined magnesia, and one grain and a half of Dover's powder, in jelly. Do not attempt forcibly to check the looseness, but rattler to moderate it, and to improve the stools. If the motions are very slimy or bloody or squirted out forcibly, three or four leeches should be applied to the belly, and followed by fomentations, and a clyster of thin warm starch and olive oil; the medicines just named must likewise be continued in smaller doses, and a flannel bandage applied round the belly.

From whatever cause a diarrhoea proceeds, whenever it is found necessary to check it, the diet ought, at least in elderly people, to consist of rice, boiled with milk or beef-tea with asked flour, together with preparations of sago, pearl-barley, arrow-root, and Embden grits, and the lighter sorts of roast meat, as mutton and lamb. Vegetables should be altogether avoided, and a little weak brandy and water be taken now and then instead of malt liquor. But in children and young persons ripe fruit, such as cherries, strawberries, gooseberries, cooked apples and pears, may be allowed with great advantage. People usually suppose that fruit is a bad thing in diarrhoea, but this is a great mistake as it respects young people.

Those who are liable to frequent returns of this disease, either from peculiar weakness or too great an irritability of the bowels, should live temperately, avoiding crude fruits, unwholesome vegetables, and all food of difficult digestion.[1] They ought likewise to be aware of cold, damp, and all sudden changes; and they should wear flannel next the skin.

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In most cases of this complaint, purgatives are found to be injurious, although mild aperients are sometimes very useful, especially if the patient has taken indigestible food or eaten to excess; which forms a grand mark of distinction between the treatment of dysentery and diarrhoea, as in the former, purgatives are almost always more or less necessary and frequently of eminent utility.

It is a common domestic practice to give mulled port wine and spices for the cure of looseness, but it is seldom advisable, and very often injurious. A little brandy and water is a better remedy, especially if it be followed by four or five grains of the compound powder of ipecacuanha. The powder No. 127, page 208, is a valuable remedy in the looseness and disorder of the bowels so frequent in the autumn. For the simple ordinary purging of children, give three grains of rhubarb with the same quantity of magnesia, in cinnamon or spearmint water, and repeat it if necessary, once in two days. The diarrhoea that occurs during teething should never be hastily checked. It ordinarily keeps off feverish irritation; and when violent, should be moderated, but not subdued. It may be lessened by giving the infant a little rice milk or milk and baked flour boiled together. The gums should be lanced. Further valuable information respecting the looseness of children will be found in the author's volume *On Infancy and Childhood.*

DIPHTHERIA OR THROAT DISEASE

This is not, strictly speaking, a new disease in this country, but a new phase of an old disease—scarlet fever, showing itself particularly in a swelled throat, inside and outside, the tonsils and whole of the throat being covered with a thick cream-coloured or ash-coloured exudation. In fact, a plastic, false membrane is formed in the throat (pharynx); tonsils and uvula. It is often seen like patches of chamois leather, coating the inside of the throat. Difficult breathing is present, and a difficulty of swallowing, and the type

1. See the information given respecting diet under INDIGESTION, which is applicable here.

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of the disease is evidently asthenic, that is, of a depressing nature. In severe cases, the urine is generally albuminous. After slight symptoms of cough and sore throat, with external swelling of the throat—not at all alarming at first, the child is suddenly seized with difficult breathing and swallowing, and the symptoms become alarming. In some instances, death takes place in a few hours after the difficulty of breathing and swallowing are manifested.

This disease proved very fatal at Haverfordwest in 1849, and at Boulogne in 1855 and 1856, and several years since at Tours in France, and other low unhealthy places. It is infectious, and often frightfully destructive to life, and has been epidemic in certain districts.

The *causes* of this alarming malady are—a specific contagion, and a poison from defective drainage.

TREATMENT—In some cases, the skin of the entire body is covered with a rash resembling scarlatina, and although the rash is not visible in many cases, yet I believe the disease is a dangerous species of scarlet fever with sore throat,—it is essentially scarlet fever, although there may be no eruption; and the best remedy is the sesqui-carbonate of ammonia internally, together with an emetic, and the use of a mixture of strong *liquid ammonia* and water, in the proportion of fifteen drops to a wine-glassful of water, to the throat. About six grains of the ammonia should be given to a child of ten years old, eight times in the twenty-four hours or oftener, in a table-spoonful of water, sweetened with some syrup. No acid drink is to be allowed. This is a far more efficacious remedy than bark, quinine, acids, chlorate of potash or any thing else that can be given.

There always exists a marked depression of the vital powers, and it is an interesting and important question, what is the cause of the sudden death which so frequently takes place in this malady? I believe it to be owing to the deposition of fibrinous clots in the heart or great vessels, at once arresting the circulation, because such clots have been found in dissection, and also because this tendency to fibrinous exudation is characteristic of the disease.

Now ammonia is one of the most powerful blood solvents

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known, and by administering it freely, we shall be more likely to succeed in curing the patient than by any other means. In the severest cases, should the sesqui-carbonate of ammonia not relieve, I strongly recommend the *liquor ammoniae* (strong liquid ammonia) to be given every second hour, in the dose of ten drops to an adult, in a wine glassful of water, since it operates more quickly acid sensibly than the sesqui-carbonate of ammonia, although this is usually sufficiently efficacious. But where sudden and alarming prostration occurs, the liquid ammonia is to be preferred, and will be found far more beneficial than wine. Brandy or steel wine, however, should be given at the same time, if symptoms of sinking appear.

At the same time, the solution of liquid ammonia and water, above prescribed, (fifteen drops to a wine-glassful of water), should be well rubbed over the tonsils and inside of the throat, by means of a camel's hair pencil or a pen with a piece of sponge tied securely on the end of it, and dipped into the solution. An emetic of ten or twenty grains of ipecacuanha powder, according to the age, will be useful in relieving the throat, and detaching the plastic membrane there; and the apartments ought to be fumigated with the nitric acid vapour, *see* page 302. Change of air also should be speedily resorted to; and the moment one child is attacked by the disease, the other children of the family ought to be instantly sent miles from home.

Many medical men use a strong solution of nitrate of silver to the throat, but it is painful, and I see no good in it, and believe the weak solution of liquid ammonia is better. Don't caustic the patient's throat, for the disease is in the blood, and the throat must be cured through that.

Chills must be carefully guarded against in diphtheria, the skin being extremely sensitive, and painfully alive to the slightest exposure to cold air. The rooms should be well fumigated with chloride of lime or Condy's fluid or Burnett's disinfecting fluid,. if not by the nitric acid vapour, which I prefer. But the principal remedy is ammonia, which ought to be commenced immediately any symptoms of this disease manifest themselves and steadily repeated.

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One of the best medicines next to ammonia is tincture of muriate of iron, which may be given in the dose of ten drops every two or three hours, in two table-spoonfuls of water, to a child of eight years old.

DROPSY

Dropsy is a preternatural collection of serous or watery fluid in the cellular membrane, beneath the skin or in different cavities of the body, and receives different technical appellations, according to the particular situation in which it is lodged. The chief varieties, each of which we shall distinctly notice, are—

1. General dropsy, that is, of the cellular membrane of the body, generally attacking both the upper and lower limbs. Called *Anasarca.*
2. Dropsy of the belly, that is, in the cavity of the abdomen Called *Ascites.* Including Ovarian Dropsy.
3. Dropsy or water in the chest. Called *Hydro-thorax.*
4. Dropsy of the head.
5. Dropsy of the scrotal bag. Called *Hydrocele.*

Dropsy under whatever form it takes place, is, in most instances, a disease of debility. Its general *causes* are those which induce debility, either general or local, such are protracted fevers; long exposure to a cold and moist atmosphere; excessive labour; unkindly child-bearing; excessive use of ardent spirits; habitual indigestion; great loss of blood; drinking cold water when heated; and insufficient or innutritious and indigestible food. Positive disease in some important organ is a frequent cause, particularly disease in the heart, liver or kidneys. Scarlatina, obstruction in the veins, and increased fluidity of the blood produce dropsy.

The *immediate cause* of all kinds of dropsy is, either a profuse exhalation on the part of the small excement arteries of the dropsical part or a want of action in the absorbing vessels; or both may be united.

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General Dropsy

This form generally commences in the lower extremities, and first shows itself towards evening with a swelling of the feet and ankles, which by degrees ascends, and successively occupies the thighs and trunk of the body. When it has become very general, the internal organs are affected in a similar way; the lungs partake of the affection; the breathing becomes difficult; and is accompanied by cough and the expectoration of a watery fluid; the urine is small in quantity, high coloured, and deposits a reddish sediment; sometimes, however, it is of a pale whey colour and more copious. There is costiveness; insatiable thirst; a pale dry skin; sallow complexion; torpor; heaviness; troublesome cough; and slow fever. The water often oozes through the pores of the skin or raises it in the form of small blisters.

Its *causes* have been stated above.

TREATMENT.—The indications of treatment are to palliate or remove the exciting cause of the complaint; then to unload the system of the weight that oppresses it; and lastly, to reesta blish the frame in health and vigour.

If a habit of intemperance, a sedentary life, innutritious food, exposure to a cold or moist atmosphere or similar causes, have originated the dropsy, these must, of course, be corrected, before any medical plan for evacuating the water can be of permanent benefit. And where the cause lies, in obstruction in the heart or liver, alterative doses of mercury offer the greatest probability of removing it, particularly the pill, No. 98, 99, page 191-92 or No. 117, page 203, which may be administered in conjunction with any of the medicines next to be spoken of.

The principal means of evacuating the accumulated fluid in all dropsies, are by the employment of certain purgative and diuretic medicines, and by scarification or other cutaneous drains. Elaterium; cream of tartar; black hellebore; the inner bark of the elder tree; gamboge; and seneka root, are generally considered to be the most efficacious purgatives in this disease; and foxglove; squill; nitre; bi-carbonate of potash; and hedge-hyssop, to be the most valuable diuretics.

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The elaterium is a powerful purgative, and will sometimes prove of great service in expelling the water. It seems best adapted to those cases in which the strength is not greatly reduced.

Take of Elaterium ..... 6 grains;
Calomel ..... 6 grains.
Rub them carefully together, and with a sufficient quantity of extract of gentian, form into twelve pills. Of these one should be taken every hour, commencing early in the morning, till they *begin* to operate, when they must be discontinued. During their operation, the patient's strength ought to be supported by strong beef tea and bread, with a little wine.

Cream of tartar has been a favourite medicine in dropsy, and very deservedly so, with many celebrated physicians. An ounce of it, mixed with ten grains of powdered ginger, may be given every three hours till it operates copiously; or half an ounce of it may be combined, with two grains of gamboge, and repeated in the same way. Dr. Home of Edinburgh, has observed that it radically cured fourteen patients out of twenty in whom he tried it. In Dr. Ferriar's practice, out of forty-three cases treated chiefly with this remedy, thirty-three were cured. They were cases of abdominal and anasarcous dropsy. Mixed with a large quantity of water it quenches the thirst very pleasantly, and the patient should, therefore, take this drink as a common beverage.

Elaterium not unfrequently produces violent irritation in the mucous membranes of the bowels, which renders it an unsafe medicine in domestic practice; I would, therefore, recommend the following form of administering cream of tartar always to be tried first—this is a valuable prescription, producing copious watery stools, together with a considerable flow of urine. It is one of peculiar efficacy, well suited to domestic, practice, and has cured dropsy in many instances after a great variety of diuretics and hydragogues had been employed in vain. Perhaps no remedy known is equal to this in dropsy, not originating in disease of the *kidney,* especially when a pill of calomel and squills is given every night at bed-time.

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Take of Cream of tartar ..... 1½ ounce;
Sulphate of potash ..... half an ounce;
Powdered squills ..... 2 drachm;
Tartar emetic ..... 1 grain.

Mix them well together, and take a tea-spoonful in water or barley water, four times a day, if not oftener.

Black hellebore has also been highly praised. The following pill, called Bacher's pill, was once in high reputation, and sold all over Europe, for the cure of dropsy.

Take of Extract of black hellebore ..... half a drachm;
Myrrh, in powder, carduus benedictus, in powder, of each ..... 11 grains.

Mix and divide the maps into seventy pills, five of which are to be taken every six hours, till they operate well on the bowels.

The expressed juice of the inner bark of the common elder tree may be taken in the dose of from a drachm to half an ounce, and repeated every three or four hours, till it has the desired effect of producing copious evacuations by stool and urine, which it is capable of doing and by which means the illustrious Sydenham observes that he had cured a vast number of cases. The decoction of seneka may be taken in the doses mentioned at page 113; but it is certainly inferior to the foregoing remedies, which may be likewise asserted of gamboge.

Sydenham very wisely remarks that, before administering purgatives, we should ascertain whether the patient be easy or hard to purge, because in the former case, the milder purgatives will generally answer best; while in the latter, the strong drastic cathartics, as elaterium, black hellebore, etc. will be absolutely necessary to produce any good effect. He speaks favourably of the syrup of buckthorn, as an effectual purge to those dropsical patients who are easily moved and relates the case of a woman who had

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this complaint to a great degree, her belly being swelled to an incredible size. He gave her an ounce of the syrup of buckthorn before dinner, and it brought away an almost inconceivable quantity of water. "Encouraged by this success", says he, "I gave it every day, only interposing a day or two occasionally, when she seemed weaker than ordinary. And the water being by these means carried off by degrees, the swelling of the belly diminished daily, and she recovered".

As diuretic remedies, *squill, foxglove* and *nitre,* are undoubtedly very valuable. The following combinations are esteemed forms for exhibiting squill :

Take of Dried squill, in powder ..... 3 grains;
Opium, in powder ..... half a rain;
Cinnamon bark, in powder ..... 10 grains.
Mix for a powder to be taken in any agreeable vehicle, three or four times in twenty-four hours.

If there appears to be a diseased obstruction in the heart, liver or lungs, the following formula will be found highly serviceable or that marked No. 116, page 202. I have employed this combination of squills and calomel with perfect success in apparently desperate cases; but it must not be given in dropsy *from disease of the kidneys.* *See* pages 397-98

Take of Compound squill pills ..... 1 drachm;
Calomel ..... 6 grains
Mix them well together with oil of juniper, and divide into twelve pills. One to be taken twice a day.

Foxglove is rarely applicable to dropsical persons of tense fibres and great natural strength; but in those with a feeble or intermitting pulse, whose dropsical limbs and body are soft and yielding, the complexion pale, and the skin cold, it is sometimes a valuable diuretic.

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Take of Infusion of foxglove ..... 4 ounces;
Tincture of foxglove ..... half a drachm;
Acetate of potash ..... 1 drachm;
Liquid laudanum ..... 10 drops.
Mix and let one table-spoonful be taken three times a day in water.

The wine of *colchicum* has been recommended, but it is very debilitating, and I cannot advise any trial of it. From a scruple to half a drachm of the powder of hedge-hyssop may be administered twice a day, and is said to be particularly efficacious in those dropsies which are the consequence of obstructions in some of the abdominal organs. *Broom ashes or* the *Broom-seed,* were formerly a famous remedy; but it being supposed that they owe their virtues to the fixed alkali they contain, medical men usually prefer giving ten or twenty grains of the bi-carbonate of potash twice a day, to the exhibition of the ashes or seeds themselves. It is, however, best to take the broom-seeds themselves. It has been said, that a large spoonful of unbruised mustard seed, taken every night and morning, together with the bi-carbonate of potash in the middle of the day, has performed a cure in a very bad case of dropsy.

If general debility has occasioned the disease, the alkali may he advantageously united with a bitter tonic.

Take of Bi-carbonate of potash ..... 10 grains;
Compound infusion of gentian ..... 1½ ounce;
Compound spirit of ether ..... half of drachm;
Tincture of cinnamon ..... half a drachm.
Mix for a draught, to be taken twice a day.

Notwithstanding what is said respecting the virtues of *broom-seed* as contained in the fixed alkali to be found in them, I very much prefer giving this remedy as it is presented to us by nature. It is true, and we rejoice in the fact, that the art of the chymist is often turned to great advantage in extracting the essential part of plants, and presenting them to us, as remedies, in a small compass, and

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even in a more efficient form, of which the invaluable preparation from Peruvian bark, called *quinine,* is an example; but this cannot be done with all vegetable substances, the attempt being in some instances worse than a failure, a valuable remedy being thereby brought into discredit. I think well of the broom-seed, and advise it to be tried in the following manner :

> Take of broom-seed, well powdered and sifted, one drachm; let it stand twelve hours in a glass of good white wine, and take it in the morning fasting, having first shaken it, so that the whole may be swallowed. Walk after it, if able; if not able to walk, use what exercise is possible, for on hour and a half; after which take an ounce of olive oil. Nothing must be eaten or drank for half an hour or an hour, after taking the oil. This is to be repeated every day till cured.

It is considered essential that no blood should be lost during the use of this medicine. Many cases of dropsy cured by these simple means have been related on unexceptionable authority, and that recently, as well as formerly. Sydenham says, *(Works by Swan.* 1769, p. 529,) of a form very similar to the above, "By this remedy alone I have known this distemper cured, in persons of too weak a constitution to bear purging, when the case was judged desperate".

Dr. Buchan speaks favourably of the efficacy of a drachm of *nitrate of potash,* taken every morning in a draught of ale; and I have known it succeed in more than one case. It is most applicable in the dropsy of young persons, and those who have a good measure of strength remaining.

In those instances in which the dropsy appears to have originated in general weakness, where there is a feeble pulse, and a blanched complexion, without organic injury, the inhalation of *oxygen gas* has sometimes proved the most valuable tonic which experience could suggest. It has immediately invigorated the whole constitution, and thus enabled it to struggle effectually with the disease so as finally to overcome it; and in all such cases as those described, it merits a fair trial. See what is said of it under *Dropsy of the Chest.*

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Under the use of either of the preceding remedies, it will frequently be highly proper to scarify the legs at the same time, which is a simple and very safe operation, if it be not left to a late period. The scarification should be made with a lancet on the outside of each knee, a little below the joint; the incision resembling in form the letter T, and just penetrating through the skin. From this cut, which will not easily close, the water will sometimes drain away in a surprising manner, and the benefit arising is often permanent.

I have said nothing respecting blood-letting in dropsy, but it is necessary to advert to it. It is a remedy which has been now and then resorted to from the earliest ages, although very cautiously; of late years several practitioners have strongly recommended it; and some of them much too strongly. In the *acute* form of dropsy, whether general or confined to the abdomen, that is, in cases where it may have appeared suddenly or advanced rapidly, from whatever cause arising, supposing the pulse to be quick, full and strong, and the constitutional powers of the patient unbroken, a single blood-letting from the arm to the extent of sixteen or twenty ounces, will often afford great relief, and pave the way for the more effectual operation of other remedies. This may frequently be followed, if necessary, by local blood-letting, by means of the cupping glasses or the application of leeches; and one of the best medicines which can be prescribed to follow the abstraction of blood is the calomel and squill pill (page 535), twelve grains of *James's powder* being added to the twelve pills.

The diet, in all dropsical cases, ought to be nourishing, that food being selected which is easiest of digestion. Tile pungent aromatic vegetables are also proper, such as garlic, onions, cresses, horse-radish, etc; and the patient's strong desire for drink may be freely gratified, for which purpose, cream of tartar dissolved in a large quantity of water, butter-milk, table-beer, weak cider of cider mired with water, will be among the most useful beverages he can resort to.

After the water has been evacuated, we must endeavour to invigorate the constitution by the use of bitter and metallic tonics,

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with aromatics, regular exercise, change of air, and the cold bath. The tonics may be taken as recommended under the head of *Indigestion.* The daily use of a little wine will be advisable, particularly Rhenish wine.

In having recourse to active purgatives in this disease, it should never be forgotten that we are treating a disease of debility, and that every purge which does not diminish the general bulk, adds to the complaint by increasing the debility. If, therefore, upon a few trials the plan be not found to answer this salutary purpose, it cannot too soon be desisted from.

Beside the medicines above noticed, a few others have at times been praised for their virtues in dropsy, the chief of which are juniper berries, nitrous ether, the diuretic salt, and the green lettuce; but they are certainly of very inferior value. Emetics, and certain sweating medicines, have also occasionally been employed; but they are uncertain in their operation, and are now rarely resorted to. Mr. Mudge, however, relates the case of a woman about forty years old, who was cured of a dropsy in the belly, of long standing, by taking two scruples of compound ipecacuanha powder at bed time, for three successive nights.

It not unfrequently happens that water accumulates in the legs, thighs, and even in the belly, as a direct consequence of consumption of long standing; from poor weak blood; old ulcers, accompanied with a considerable discharge; great weakness; and an immoderate evacuation of the juices and spirits by a salivation, sweating or purging; or from too slender a diet in the cure of the venereal disease. In such instances, purging, and other violent measures, must be avoided, the cure then depending upon invigorating the general babit by the use of nourishing diet, and tonic medicines, especially steel tonics. Ten grains of tartarized iron, combined with fifteen grains of calumba powder, and given three times a day, prove very serviceable here.

The following is an instructive case of dropsy from pressure on the external iliac vein, especially from the observations of Sir Astley Cooper which it contains, and the skilfulness of the treatment adopted; *see Lancet,* vol. ii. p. 466, 1823-24.

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"W. W., aged forty, was admitted into Job's ward, June 30th, with a swelling of the right leg. He says that, about two years since, he was kicked by a horse, whilst at work in the stables at Greenwich; the blow given by one foot of the horse was received just above the crista of the ilium, and the other foot struck the upper part of the right thigh, which produced great inflammation in it; and soon after, the glands in the grain began to swell, and remained very large and hard for a considerable time. He applied leeches and washes to the upper part of the thigh, which reduced the inflammation, but did not remove it; and, about six weeks after, an abscess formed, which burst and discharged, according to the patient's account, a considerable quantity of matter. This kept up the irritation in the gland, and will account for its remaining a long time enlarged. The gland, however, did not suppurate. For the five months preceding his admission, he says, the limb was just as large as when he came in. It was then about twice the size of the other leg. The skin had a brawny feel and appearance. The swelling was rather tense, but yielded to pressure, and, immediately that pressure was removed, it recovered its former figure. The patient complained of its feeling very heavy, and of there being a great numbness in the foot. There was also an enlarged absorbent gland, situated just beneath Poupart's ligament, and near its insertion into the pubes; in size as large as a pigeon's egg, and very hard. His tongue was moist, his pulse regular, his sleep good, his appetite unimpaired, his look florid and his general health not at all disturbed.

"Mr. Morgan being unwell to-day, July 2nd, Sir A. Cooper saw this patient, and at his bed-side made the following remarks : 'Dropsy, it is said, arises from an increased action of the exhalents or from a diminished action in the absorbents, and this, in a general way, is true; but the appearances of the dropsy produced by these causes are very different. In the one you have a tense, shining, semi-transparent skin; and, if you press your finger on it, you will find it will sink into the swelling, as if you were kneading dough, and that depression will continue some time; but, in the other or that which arises from a mechanical impediment on the trunks of the absorbents, you cannot produce any pitting on pressure, and the skin has the appearance which you now see'. He then ordered a grain and a half of calomel twice a day, and the limb to be anointed with the camphorated mercurial ointment every night. The patient was also ordered rest and the horizontal posture, with a low diet. With this treatment the

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swelling rapidly decreased in a week, and continued to do so, more slowly, for a fortnight. He then left off his mercury, as his mouth had been kept some time very sore, and was ordered some brisk aperient medicine".

"July 26th—The leg now is very little larger than the other; he can use it without any inconvenience, and the glandular enlargement has almost entirely subsided. He takes no other medicine but the house physic every morning, which is necessary to keep his bowels regular. His health continues very good."

Dropsy of the Belly

This variety often comes on with loss of appetite; sluggishness; inactivity; dryness of the akin; oppression of the chest; cough; diminished urine; costiveness; and the other symptoms enumerated under the first variety. Shortly after a protuberance is perceived in the hypogastrium, which gradually extending, at length occupies the whole abdomen, which uniformly becomes swelled and tense, in a small degree elastic and communicates to the hand when struck against it, the sensation of its containing an undulating fluid. The disease seldom continues long without inducing a dropsical state of the lower extremities.

In the dropsy of the belly most commonly met with, the water is contained in the general cavity of the abdomen; but there is another form sometimes occurring, in which the fluid is collected in sacs formed upon, and connected with, one of the abdominal organs : this is called the *encysted* dropsy. It is seldom accompanied, in the first instance, with any disordered state of the system; is distinctly observed to begin in a particular part of the belly, and thence gradually to diffuse itself; the strength of the patient is long unimpaired; and the appetite and respiration continue good, until the bulk and pressure of the fluid bring on those constitutional effects, which usually attend the ordinary forms of abdominal dropsy in its early stages. The *encysted dropsy of the ovaria* is not uncommon, and is treated of in my book On The Diseases Of Females.

In addition to the general *causes* of dropsy described at page

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530-31, we may notice disease in the bowels, liver or pancreas; enlargement of the mesenteric glands; and local injury.

It is sometimes difficult to *distinguish* abdominal dropsy from pregnancy, where the latter is wished to be concealed; and the real nature of the case can only be known by a suitable enquiry into the state of the monthly discharge, of the breasts and of the swelling itself.

TREATMENT—The indications and general plan of treatment are precisely the same as have been detailed under the first variety; but here, instead of evacuating the water by scarification, we draw it off at once by tapping. When the fluid lies in the general cavity of the belly we can often afford very great relief by this process, and sometimes an effectual cure. If, therefore, the foregoing remedies fail to evacuate the water, tapping should not be delayed; indeed, it is the opinion of some well-informed professional men, that, under these circumstances, the operation cannot be too soon performed after a fluctuation is directly felt, and the swelling from its bulk has become troublesome to the breathing, and interferes with the night's rest. In this opinion the present author fully concurs, and believes that though the first operation should not succeed, we shall frequently gain great advantage from a repetition of it. Instances have occurred in which a cure has been effected after twelve, sixteen or more tappings; and a foreign author relates a cure after sixty tappings within two years and a half, in conjunction with a steady use of aperients and tonics.

One of the most efficacious remedies in this form of dropsy, is the pill of calomel and squill, prescribed at page 534. Sir Astley Cooper found this medicine very valuable in dropsy of the belly, and I have a repeatedly experienced it to be far superior to any other medicine employed; indeed, how strongly soever other means may be vaunted, it is my fixed belief, drawn from repeated observation, that its efficacy *very far exceeds* that of any other single medicine or combination whatever,[1] if we except the powder described at page 532-33.

1. "Mercurial preparations are not always applicable; for when the dropsy is connected with organic change in the substance of the liver, they should be

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"The medicines which experience has proved to be the most beneficial here, are calomel and squill; one grain of calomel and three of squill in powder may be formed into a pill or two grains of blue pill with three of squill; one of these should be administered every night or every other night, and in the day you should give a mixture, composed of from seven to ten grains of carbonate of ammonia, one drachm of sweet spirit of nitre, twenty drops of tincture of digitalis, and an ounce and a half of camphor mixture. This draught, given once or twice a day, with one of the above pills at night, will often succeed in restoring a person to health whose constitution may be considered so broken and faulty, that it may be deemed impossible for him ever to regain a sound state of body. Should the dropsy have arisen from the irritation caused by hard drinking, this practice must be relinquished or the complaint will not disappear."—*Surgical Lectures,* No. 46.

This eminent practitioner correctly remarks in another part.

"Medical treatment, when judiciously pursued, is very often successful in the cure of ascites; in the use of medicines, however, you most take care to direct their influence against the cause of the dropsy. Therefore, if the liver is the defective organ, you should endeavour to restore its healthy functions, and in this attempt your efforts will frequently be crowned with success, unless the disease has existed so long a time as completely to have broken up the constitution."

Bright's Dropsical Disease

A few years since Dr. Bright brought under the consideration of the medical profession a peculiar kind of dropsy, *originating in disease of the kidneys,* which is indicated by the coagulability of

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given with circumspection. When the obstruction exists chiefly in the venous and lymphatic systems or depend upon disease of the heart; or when the effusion is caused by increased action in the serous membranes; they are valuable medicines. The scrophulous habit and weak; vital energy are not always satisfactory reasons against their use."—Dr. Copland's *Dictionary of Medicine,* vol. ii. p. 619.

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the urine. I have already treated of this complaint at page 388, but would make here a few additional remarks.

The disease may have been in existence for months, nay, even for a year or more, without the consciousness, on the part of the patient or any material departure from health. He may have been sensible of a growing weakness, of some derangement of digestion, of an occasional tendency to frequent micturition, of some obscure or fugitive pain in the loins; he may even have observed a diminution in the quantity of his urine or some irregularity in its appearance; but these symptoms were perhaps insufficient to call his serious attention or excite alarm. The first thing which occasions anxiety, and leads to an application for medical aid, is usually the occurrence of edematous or puffy swelling, commencing often in the face, and extending rapidly over the body. The physician is consulted on account of the dropsical symptoms, and the previous existence of the phenomena above mentioned is ascertained upon enquiry.

Dram drinking is a very frequent cause of this peculiar kind of dropsy, but it is certainly not confined to this species of intemperance, as it is frequently found in patients who have suffered from any tedious exhausting disease, such as diarrhoea and consumption, and may arise independently of these complaints. Some disease of the heart is often associated with Bright's disease.

This kind of dropsy is distinguished from others by the urine being coagulated by heat and nitric acid.

TREATMENT—Symptoms of congestion in the head often accompany this form of dropsy, arising probably from an insufficient supply of blood. Dr. B. Jones says he knows no single remedy in this disease which has produced an effect at all equal to that of a blister on the back of the neck. This appears to indicate that there is some local congestion of the brain, as well as some poison in the blood.

The principal indications are to relieve the congested kidneys, and to improve the general health. Dandelion, digitalis, cream of tartar, three times a day, and a little compound jalap powder every other night, and abstinence from stimulants, are the best agents.

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To improve the health, proper air, exercise, food, cod-liver oil, and small doses of iron are essential. Mercury should never be employed in this malady.

This is a dangerous form of dropsy, and temporary relief is generally all that is obtained from medical treatment. Life may be prolonged for years. "Even with ascites," says Dr. Bence Jones, *Medical Times and Gazette,* May 8, 1952, "I have known a patient in and out of St. George's Hospital "I have knon a patient in and out of St. George's Hospital for ten years. Usually, although every complication may be removed, the albumen continues in the urine. The patient resumes his work, and considers that he is recovered; but heat and nitric acid she that this is not the case, and it is only by great care that the return of the former symptoms or to gout, can be prevented." Ten drops of tincture of digitalis may be given in conjunction with a drachm of cream of tatar, in barley water, thrice a day.

Dropsy of the Chest

This complaint commences with diffculty of breathing, particularly on exertion or lying down which is usually acompanied with a dry and troublesome cough, and a swelling of the ankles towards the evening. There is a sense of oppression at the chest; increasing diffculty of breating; pale countenance, sometimes, however, it has a livid tinge, and conveys a peculiar and striking expression of anxiety; urine high coloured and spare; pulse irregular, and often intermiting; palpitation of the heat; and dropsical swelling of the arms and legs. The sleep is disturbed by frightful dreams; the patient suddenly starts from his bed with a dreadful sense of suffocation; and through the whole course of the complaint, there is, for the most part, a peculiar posture in which the patient sits constantly upright, with his shoulders raised and fixed,, which he often contrives to effect by fixing his forehead on the back part of a chair, and thus pressing forcibly upon it.

The *causes* are those already noticed at page 530-31, acting more immediately on the organs of the chest.

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TREATMENT—The general plan of treatment is the same as that already laid down at the 40th and following pages; but squill is here sometimes particularly valuable, affording great relief to the teasing cough, besides being a useful diuretic. Either of the prescriptions for the exhibition of squill, given at pages 529-30, may be employed, adding two grains of James's powder to each dose; or the mixture No. 78A, page 180, may be tried; with which frequent blisters to the chest should be combined. Indeed, whatever medicine is resorted to, blisters ought not to be omitted, as they appear to be very serviceable in this variety of dropsy. Five or six grains of the compound powder of ipecacuanha, combined with a grain of calomel, is an eligible night pill to procure rest.

Many physicians have extolled the foxglove in this disease, and the form No. 86, page 186, is an excellent one for its administration, but it requires the superintendence of a professional man.

If there be much debility, myrrh and sweet spirit of nitre have been recommended.

Take of Myrrh, in powder	10	grains;
Sweet spirit. of nitre.....	1	drachm;
Infusion of roses	14	drachms;
Syrup of roses	1	drachm.

Mix for a draught, to be taken three times a day.

If other remedies fail, the inhalation of oxygen gas merits a trial. It has certainly been used with complete success in bad cases, and I would never leave a patient afflicted with dropsy of the chest without resorting to it. Mr. Barr of Birmingham, has related a case cured by it, in which "the patient's face was become pale and emaciated; his eyes stared as if taking a last conscious view of their objects; his legs were swelled to such a degree, that the skin was become much inflamed; ha had a continued tenesmus, and made very little urine; he could not endure a horizontal posture for a moment; he slept little, and frequently started from his sleep, under an impression of immediate suffocation". In four weeks from

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the patient's beginning to inspire the vital air, not a vestige of the disorder remained, except weakness; and at the age of sixty, he seemed to possess uncommon strength, agility and vivacity.

If there be a palpable fluctuation of the chest, and all other means have been tried without avail, it is usual to evacuate the water by passing a trocar between the fourth and fifth false ribs.

Dropsy of the Head

Dropsy of the head consists in an enlargement of that organ from watery accumulation, the sutures or natural articulations of the skull generally gaping. It is a chronic disease, and not uncommon in children, yet it ought to be carefully distinguished from the acute complaint called water in the head, of which we now hear so much, as this latter is in reality an active inflammation of the brain, and is fully described elsewhere.

It usually commences with a gradual enlargement of the head, from a separation of the natural divisions of the skull, attended with slight fever, heavy pain in the head, and sometimes stupor and disorder in the bowels. But the last symptoms are occasionally very slight.

Its common *cause* is debility, either general or local.

The *marks of distinction* between this complaint and the acute inflammation of the brain, now so generally called "*water in the head*", are clearly pointed out under that article.

TREATMENT—As the present is a chronic disease of debility, no very active medicines are proper. Alterative doses of cacomel, as in the pill No. 98 or 98A, page 192, given every night or every other night, with steel medicines No. 84A, page 184, cold lotions to the head, and an occasional aperient, form the most valuable plan of proceeding hitherto suggested. Blistering the head and neck also is sometimes useful.

When the integuments of the head are much distended, and the articulations gape wide, the skin has been punctured with a lancet, and the water drawn off by degrees. This has occasionally been done with success, but it must always be resorted to with

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great caution, and the fluid discharged by separate stages; for if the whole were drawn off at once it will produce fainting, and may be followed by a dangerous exhaustion.

Dropsy of the Scrotal Bag or Hydrocele

The hydrocele is a soft, transparent, pearl-shaped, dropsical swelling of the scrotum, which progressively enlarges without pain.

The ordinary treatment consists in puncturing the scrotum, and injecting a slightly stimulating fluid, as wine and water, which excites a moderate degree of inflammation, by which means the two surfaces, between which the dropsical fluid is contained, adhere together, and the cavity being thus destroyed, all future accumulation is prevented. This operation must, of course, be done by a surgeon.

In recent cases, however, an emetic administered every day or every other day, has sometimes succeeded in dispersing the swelling. Alterative doses of mercury are also occasionally useful, with which may be combined the application of a stimulating lotion, (as No. 68, page 173) to the affected part. If there be any pain, leeches should be applied before using the lotion.

DYSENTERY OR BLOODY FLUX

Dysentery is an inflammatory affection of the larger bowels, in which the stools are frequent, and often bloody, attended with griping and tenesmus, the ordinary excrement being seldom discharged, and when it is, the quantity is small, and voided in the form of hard nodules. Fever very frequently attends the acute form of the disease.

It is a disease of vast importance on account of its frequent fatality. It is frequent and dangerous in Europe, especially when large bodies of men are collected together, as in fleets and armies; and in hot climates it is probably the most fatal of all diseases, not excepting fever. It was the most destructive disease in the British army in Holland, in 1748, and in the Peninsula, when the Duke of

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Wellington commanded. It has often appeared as a destructive epidemic in various parts of the world. That noble man and distinguished soldier, Sir Henry Havelock, died of it in India.

The disease sometimes comes on with shivering, succeeded by heat and thirst, and other *symptoms* of fever; at others, the affection of the intestines is the first symptom. There exists unusual flatulence in the bowels; severe griping; frequent inclination to go to stool; tenesmus; loss of appetite; nausea; vomiting; frequency of pulse; and a frequent discharge of a peculiarly fetid matter by stool. This matter varies in appearance, being sometimes pure mucus or mucus mixed with blood; pure unmixed blood; matter (pus) or putrid sanies; and often films of a membranous appearance or small fatty masses, floating in a large quantity of liquid matter. Hardened excrement is likewise sometimes passed. There follows great emaciation and debility, a quick and weak pulse, sense of burning heat and intolerable bearing down of the parts. The urine is always scanty and high-coloured, and sometimes of a pungent odour.[1]

The fever accompanying dysentery may be either the simple inflammatory or the typhus fever. In the latter case, the disease is powerfully contagious and of a dangerous nature.

This complaint appears under an *acute* and a chronic form. In the *acute* form, the symptoms are urgent and clearly inflammatory; the natural faces very rarely appearing, the pain and tormina great, and blood often passing in large quantities. It terminates, for the most part, within a month.

The *chronic* species is generally a sequela or consequence of the acute, and is, as its name imports, of a less inflammatory and more protracted character than the latter; here the stools are often

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1. In every case of dysentery", says Dr. Johnson, "that has ever come within the range of my observation, two functions were invariably disordered from the very onset, and soon drew other derangements in their grain. These were the functions of the skin and the liver; or perspiration and biliary secretion. I defy any one who has attentively regarded this disease at the bed-side, to produce a single instance, in which these functions were carried on in a natural manner at any period of the disease".—*James Johnson on the Influence of Tropical Climates.*

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frequent, loose, and have much the appearance of the natural excrement, but mixed with blood, and passed with severe tenesmus or bearing down of the anus.

It will be seen from these observations, that those who have never before been attacked with dysentery or after a long interval of health, more especially if of a strong or intemperate habit, are most likely to have it in the acute form, at the commencement at least; while those who have repeatedly suffered from it or whose constitutions have been broken down by excessive fatigue, intemperance or other causes, will often be invaded by the chronic species, even from the beginning.

The dissection of those who die of dysentery, has invariably disclosed an inflamed and ulcerated state of the internal membrane of the lower intestines, and especially of the colon and rectum, thus proving that the essence of the disease consists in an inflammation of those parts. The small intestines are likewise often inflamed, although not to so great a degree as the large. The liver is sometimes found diseased, but this is probably only a secondary affection, found chiefly orexclusively, in those who have a previous disposition to liver complaint.

The *principal causes* are, suppressed perspiration; a rich and stimulating or indigestible diet; the immoderate use of fruit; a damp atmosphere, succeeding to a high temperature; exposure to noxious exhalations and vapours; sleeping on damp ground; and especially a specific contagion.

It is most common in summer and autumn, and in weak, ill-fed and intemperate habits.

It is chiefly *distinguished* by the presence of gripings, tenesmus, fever, and more especially by evacuations of blood.—See *Diarrhoea.*

TREATMENT—*The indications of treatment in acute dysentery are, to subdue the local infammation; to allay irritation; and to restore a healthy secretion from the skin;* and these objects are most certainly secured by the use of ipecacuanha, calomel and opium combined,—or nitric acid and opium, by purgatives, and blood-letting. Almost the whole of these remedies are called for in

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proper succession, according to the symptoms that present themselves, in all very severe cases, more particularly in hot climates.

In Europe, a valuable plan is to give immediately a full dose of salts (No. 73, page 176) to clear the bowels; with six grains of Dover's powder, and half a grain of calomel, made into two pills, thrice a day, the emollient injection No. 9, page 147, twice daily, and the warm bath at ninety-eight degrees in the evening. These salts must be repeated every morning afterwards, at least in the beginning, and until the acute symptoms give way, when their repetition once in two days will generally be sufficient; the Dover's powder and calomel being continued as just advised, with the warm bath, formentations and clysters.

Another excellent plan is to give a scruple of the tartrate of potash and soda, and eight minims of laudanum, in two table-spoonfuls of water, every four hours; the patient being strictly confined to bed, and supported on sago, baked flour, and other fluid nourishment—and the whole belly being enveloped by a large hot poultice of linseed meal.

If severe bilious symptoms are present, a dose of calomel and rhubarb, as two grains of the former with fifteen of the latter, may sometimes be advantageously employed as a purgative in the morning, instead of the salts above described. The calomel and rhubarb might be given twice or thrice a week, and the salts on the remaining days, when purgatives are required.

Blood-letting is rarely required in this country; but in tropical climates, if no typhoid symptoms exist, and if the pulse be full and hard, and the patient strong, sixteen or twenty ounces of blood should be drawn from the arm directly, and it may be quickly repeated, if these symptoms denoting inflammation continue but little abated by the first bleeding. In the majority of severe cases, the application of leeches to the lower part of the belly will be very useful, whether general blood-letting be resorted to or not. In many instances, a large blister or a linseed-meal poultice, may be laid over the abdomen with much advantage, after leeching; and the bowels should be invariably encircled by a broad roll of warm flannel.

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A combination of calomel, ipecacuanha, and opium will often be found of inestimable service in this complaint; indeed, there are perhaps few physicians who do not consider it the most powerful medicine in dysentery we possess. Therefore, it ought never to be overlooked in hot climates. A grain of calomel, three grains of ipecacuanha powder, with the third of a grain of powdered opium, may be made into a pill with aromatic confection, and given three times a day; or half a grain of calomel and six grains of Dover's powder, (for Dover's powder contains both opium and ipecacuanha), made into a pill in the same manner, may be administered thrice daily, as already advised.

Ipecacuanha is justly considered one of the most valuable medicines in dysentery, both in Europe and sultry climates, being sometimes found more efficacious in procuring a discharge of the natural stools than any other remedy. This property it owes to its well-known power of gently stimulating the mucous membrane of the intestinal canal, and thereby lessening irritation and preternatural contraction there, at the same time that it determines to the surface of the body. It has been regarded by some even as a specific in this complaint, and I know no respectable writer who denies its usefulness. The usual mode of exhibiting it here, is to give it in such small doses as will act moderately on the bowels, without proving, emetic, for example, two grains three or four times a day. In these dose, as I have above remarked, it may be advantageously united with calomel, and may also be added to each aperient draught of salts. But larger doses of ipecacuanha may be used with perfect safety and great benefit in severe cases, in hot climates. The following is very sound practice in India, Africa and other hot countries—give half a drachm of ipecacuanha powder directly, fasting. Let the patient lie in bed quietly, and not drink anything to excite vomiting. Repeat the ipecacuanha every morning fasting, until it produces copious bilious stools, and the patient is sensibly relieved. At the same time, administer night and morning the following ipecacuanha injection :—

Pour a pint and a half of hot water on one drachm of bruised

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ipecacuanha root. After standing an hour, strain it, and add an ounce of syrup of morphia.

This treatment soon relieves the dysentery, and on the third or fourth morning give a full dose of castor oil, that is, three table-spoonfuls. After relief obtained in this wax, though no blood should appear in the stools, yet a mucous diarrhoea, with tenesmus, tray harass the patient. If so, give the pomegranate bark mixture, No. 85B, page 186.

In the *commencement* of acute attach of dysentery, more especially if the inflammatory symptoms run very high, opium should not be given alone, either in a liquid or a solid state. In such a condition, our chief regard must be directed to lessen the existing inflammation by ipecacuanha, aperients, the warm bath, and emollient clysters. As an anodyne in this complaint, there appears none so suitable and efficacious for general use, as Dover's powder, that is, the compound ipecacuanha powder. If, therefore, it is not exhibited through the day, as one of the principal remedies, a dose of eight or ten grains may be given in pills, every night. No 124A, page 206, is also good.

In the aggravated cases of bloody flue so often witnessed in India, and other hot climates, the following will be found a safe and efficacious mode of proceeding. Let half a drachm of calomel, two scruples of ipecacuanha powder, and eight grains of powdered opium, be made with aromatic confection into twenty-four pills, of which two are to be taken, two, three or four times in the twenty-four hours, according to the urgency of the symptoms; a full dose of the mixture No. 73 or an ounce of castor oil, being given every day to clear the bowels, with the warm bath and fomentations, emollient clysters, and a flannel bandage, as already advised. At the same time, if the inflammatory symptoms are considerable or blood appears alarmingly in the stools, bleeding may be immediately resorted to, and be soon repeated, if the inflammation does not give way. Should the symptoms of local uneasiness and tenesmus be great, a ten-grain dose of Dover's powder may be taken at night.

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In cases of great urgency occurring in India, calomel administered in the dose of a scruple, twice or thrice a day, with the use of the other means just noticed, has been often found of signal service.

Nitric acid and opium, mixed with water, sometimes produces the most excellent effects, both in dysentery and diarrhoea, and it may always be tried with safety, in the following form. It has plucked many from the jaws of death.

Take of nitric acid..... 2 drachms;
Solid opium..... 2 gains;
Water ..... 3 ounces.
Mix, and take a tea-spoonful three or four times a day, in common or barley-water.

The object is to support the strength with as little irritation as possible. The diet, therefore, ought to be mucilaginous and diluting, consisting chiefly of preparations of sago, rice, arrow-root, gruel, baked-flour and such like. At the commencement of the disease, it will generally be best to confine the patient to these; but in a more advanced stage, and when the weakness is considerable, jellies and broths, taken with bread, may be allowed. Should the debility be extreme, without any tendency to acute inflammation, the complaint having lasted some time, a little wine diluted with water and mucilage will sometimes be advisable. The drink should be always lukewarm.

When the patient begins to recover, his appetite sometimes outstrips his digestion, and care moust, consequently, be exercised not to exceed a very moderate quantity of food, even where the appetite is keen, for if too much indulged in the weakest organ suffers increased irritation, and a severe relapse invariably follows.

The horizontal posture and perfect rest must be constantly observed, and the greater the irritation the more requisite they are. The patient ought not to give way to the frequent inclination to stool, but stifle it as much as possible. The stools must be immediately removed from the patient's chamber, which should

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be freely ventilated at all times, and frequently sprinkled with vinegar. In malignant dysentery, the patient should void his motions into a vessel half full of water, to which a tea-spoonful or two of the concentrated chloride of lime has been added: this removes all smell instantly, and destroys infection. In such bad cases, the diluted chloride must he sprinkled over the apartment twice a day, (*see* page 305). It is advisable also to bury the motions when the disease is malignant, as the effluvia arising from them has been known to give the disease both to men and animals, even after they have been deposited in the usual receptacle.

During convalescence, flannel should be constantly worn next the skin, and the most scrupulous attention be paid to avoid dews, damp night air, and sudden atmospherical vicissitudes, more especially in hot or unhealthy climates; and no article of diet difficult of digestion must be touched.

After leaving off other medicines, the patient should take an infusion of calumba or quassia, with or without a little nitrous acid and opium, to give tone to the bowels, which should be continued till they have recovered their vigour. This combination of the quassia infusion and nitrous acid is often of great utility as a restorative in the decline of the disease.

Take of nitrous acid	1	drachm;
Infusion of quassia.....	8	ounces;
Tincture of opium	40	drops.

Mix, and let one fourth part be taken three times a day.

It must be the *nitrous* acid, and not the *nitric*, which has not he same effect.

If pain and irritation are still occasionally felt, four or five grains of the compound ipecacuanha powder may be taken when the pain calls for it.

In Chronic Dysentery (that is, the protracted species of the disease, in which the acute inflammatory symptoms have subsided or been subdued), our objects are nearly the same as in the acute variety, only we are called upon constantly to remember, that

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debility is invariably associated with this form of the complaint, and therefore every proper means of preserving and increasing the general strength must be employed. Of all the remedies yet discovered for chronic flux, calomel, opium, and ipecacuanha in combination are, undoubtedly, the safest and the best. Many patients, tormented for a long time by this painful malady, have been speedily relieved, and ultimately completely cured by this invaluable medicine. It is equally adapted to the protracted dysentery so often met with in hot climates, and to that of colder regions. An old medical aquaintance of mine, who had this disease dreadfully severe, while attached to the British army of occupation in France, was perfectly cured in a short time by this medicine alone, after the numerous expedients previously resorted to by almost the whole medical staff had entirely failed. The following is an eligible form of exhibiting this combination :

Take of Calomel ..... 10 grains;
Turkey opium, in powder ..... 5 grains;
Ipecacuanha powder ..... 20 grains.

Rub them well together, then form them into a mass with aromatic confection, and divide it into ten pills. One should be taken directly, and repeated every night and morning till the severity of the symptoms is overcome, when its repetition every night will be sufficient.

If the exhibition of the preceding pills should not be followed by satisfactory results, the union of Dover's powder and calomel may be very serviceable. A grain of calomel and three or four grains of Dover's powder may be made into a pill, with a little aromatic or opiate confection, and taken twice or thrice a day.

The mixture of nitrous acid and quassia bark, noticed above, is likewise often useful. This medicine may be given with great advantage after leaving off the mercurial remedy, to give tone to the bowels, and perfect the cure.

Some physicians say they have found a combination of charcoal powder and Dover's powder very useful in the chronic form, and others speak favourably of the sulphate of copper. The latter

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medicine is given in doses of half a grain, gradually increased, if necessary, to one or two grains, with half a grain of opium, thrice daily.

The diet in chronic dysentery must, of course, be mild, unirritating, and chiefly farinaceous, consisting mutton broth, rice, sago, arrow-root, oatmeal gruel and boiled milk. A very excellent diet here is flour and milk, well boiled together, which, with a very little sugar and spice, is highly relished by the debilitated patient.

The patient, must constantly wear a flannel bandage round the bowels, and keep the feet and legs warm by wearing woollen stockings and drawers.

If, after the subsidence of the dysentery, there remains a sallow hue of the complexion, tenderness on pressure in the right side, and a clayey appearance of the excrement, take the pill No. 117, page 203 or No. 99, page 192, every night, a tea-cupful of lime-water thrice a day, and be very attentive to daily exercises, and to friction over the region of the liver and bowels, with the liniment No. 45, page 163.

EAR-ACHE

Some persons are much troubled with ear-ache on exposure to cold, which usually depends on a natural weakness of the organ or an unnatural susceptibility imparted to it by disorder of the digestive organs. In such a state, a little cotton should be loosely worn in the ear to defend it from the external air, and every appropriate means be taken to strengthen both the part and the general constitution, by means of frequent washing with cold water, cold bathing, and the employment of those measures calculated to amend the general health.

TREATMENT.—Sometimes ear-ache is connected with chronic ulceration in the internal or external part of the ear, when injections of warm water and soap are advisable. In this case, there is sometimes a constant fetid discharge, for which in union of Peruvian balsam with ox-gall has been recommended by Dr. Hugh Smith :

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Take of Ox-gall ..... 3 drachms;
Balsam of Peru..... 1 drachm.
Mix. A drop or two to be put into the ear with a little cotton.

For the treatment of an accumulation or deficiency of wax, see the article DEAFNESS.

In all chronic affections of the ear, a soothing plan of treatment is the best; and it should be particularly remarked, that this organ will not bear tampering with, as from its vicinity to the membranes of the brain, improper or irritating applications are frequently dangerous.

But pain in the ear may be so severe as to indicate the presence of inflammation, which will be known by the accompanying frequency and hardness of the pulse, and the presence of fever. An acute disease will then demand our attention, and will require bleeding, by means of leeches applied near the part affected or by the use of the lancet, followed by warm formentations, blisters behind the ears, and the saline purgative No. 73, page 176. The employment of leeches will generally be sufficient, and the diet should be confined to simple farinaceous decoctions of barley, grits, etc.

But one of the best modes of treating this disease is by exhibiting an emetic, combined with a purgative medicine. This will often cure ear-ache far more certainly and more speedily than blood-letting, blisters, fomentations or any other means; and the reason is, that this complaint generally originates in congestion of the liver, and derangement of the other digestive organs, which the emetico-purgative medicine is eminently calculated to remove. For this purpose, thirty grains of ipecacuanha powder, one grain of tartrate of antimony, and three grains of calomel, may be taken together in a little treacle, and followed by a free draught of lukewarm water. This may be repeated twice or thrice, if necessary. Dr. James Kennedy affirms, that he has treated twenty-five cases of this disease in this manner, with uniform, rapid and complete success.

If the patient thinks the preceding too severe a course, let him

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take the pill No. 98, page 191, every night, with the draught No. 27, page 155, the first thing on awaking, and the pills No. 104 or 104A, page 197, during the day. After the ear-ache has been removed, let a dose of the fluid extract of sarsaparilla be taken in water twice a day or the mixture of bark and muriatic acid No. 84, page 184.

Ear-ache is sometimes connected with carious teeth or stumps, and if the disorder resists the means used, we may suspect this to be its origin. Creosote may then be of great service, if extraction be not resorted to. For the mode of using it see TOOTH-ACHE.

Now and then the pain spreads from the ear over the whole or a greater part of the head, attended with high fever, giving us reason to suspect that the inflammation has extended to the brain; delirium not unfrequently follows, and the disease becomes dangerous. The most powerful local and general means must now be combined, and the proper course to be pursued will be found under the head of *Inflammation of the Brain.* It is a happy circumstance, however, that the most violent forms of inflammation of the ear more frequently terminate in suppuration than in death; and if the brain has partaken of the inflammation, the suppuration in the ear generally relieves it.

Should suppuration occur, matter will be discharged for some time, when the simplest and mildest injections only ought to be employed to keep the parts clean, and promote the healing of the ulcer, as soap and warm water or from five to ten grains of sulphate of zinc dissolved in a pint of rose water, to be used lukewarm.

EPILEPSY OR FALLING FITS

This is a disease consisting of paroxysms of convulsions, returning at uncertain periods, accompanied by an abolition of sense and voluntary motion, and ending in somnolency or complete sleep.

Its attacks are sometimes sudden, when the patient falls at once to the ground in a state of utter insensibility; sometimes they are preceded by certain premonitory symptoms, such as languor, pain or giddiness in the head, drowsiness, dimness of sight, and ringing

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in the ears, etc. In the fit, the involuntary muscular power is often excessive; the body is bent forwards or drawn backwards with great force; the eyes roll furiously; the lips are convulsed, and covered with a frothy saliva; the tongue is thrust violently from the mouth, and is sometimes shockingly lacerated; the pulse is irregular; the breathing oppressed and occasionally highly laborious; and in some cases, bilious matter in large quantities is erected from the stomach. These *symptoms* sooner or later gradually give way, and the unhappy patient falls into a profound sleep.

The paroxysms vary greatly in degree, duration and period of return, in different cases.

The most frequent *causes* are irritation in the stomach and intestines; a diseased state of the spinal marrow; sudden fright; excessive grief; great loss of blood; the suppression of accustomed discharges or cutaneous eruptions; the action of mineral poisons; excess in drinking; and the imprudent use of calomel.

On the dissection of those who have died epileptic, various diseased appearances have been observable, chiefly within the head, such as tumours, effusions, indurations and marks of disorganization in some part of the brain. M. Wenzel, Professor of Anatomy in the College of Mayence, who has had great opportunities of instituting anatomical examinations in this disease, says, "that in a very great proportion of the heads he examined he found the cerebrum[1] in a healthy state, but the cerebellum[2] uniformly, and in a very extraordinary degree and manner, diseased.[3] But after the most careful examination, the inquiry perpetually recurs, whether we are to consider

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1. The large and upper portion of the brain.
2. The small portion of the brain, situated at the base of the head.
3. According, to Flourens, a French physiologist, it will be found that in slicing the cerebrum the intellect is affected, while in slicing the cerebellum the motion will be affected; from which we may fairly draw the inference, that the cerebrum is most connected with the intellect, and the cerebellum with the locomotive and muscular powers of man. Thus, it will be seen what great support the experiments of Flourens affords to the inference naturally drawn from Wenzell's examinations, that the *immediate cause* of Epileptic Convulsions is some alteration in the structure or functions of the cerebellum.

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the diseased appearances present, as the cause or consequence of the disease?

The involuntary laughing or weeping, and the sensation of a globe rising in the throat, which accompany hysterics, will sufficiently *distinguish* this disease from epilepsy. For the signs distinguishing it from Apoplexy, see that article.

TREATMENT—The most powerful remedies in epilepsy are, the ammoniate of copper; flowers of zinc; leaves of the orange tree; misseltoe; lady's smock; setons or issues; and a strict regard to the diet and regimen proper for the case. Dr. Cullen, the celebrated Professor at Edinburgh, was very partial to the ammoniate of copper, and numerous cases are on record in which it was successfully employed. Dr. Beattie says, " it seldom fails to cure epilepsy; never, if the disease be idiopathic[1] and the patient not exhausted".

Take of Ammoniate of copper ..... 20 grains;

Bread crumb and mucilage of gum arabic, a sufficient quantity to form it into a mass : which is to be divided into forty pills.

In the beginning, one of these is to be taken three times a day, and gradually increased to two or even three pills, thrice a day.

The flowers of zinc were once in high repute in epilepsy, and in all other spasmodic complaints; but they have suffered of late, like every other medicine, from druggists having frequently sold a bad article. The dose is three grains, made into a pill with extract of gentian, twice or thrice a day, which may be increased to six or seven grains. These preparations of copper and zinc may be given alone, as now directed or each dose of either medicine may be combined with three grains of camphor, which Dr. Cullen thought capable of increasing their virtues.

The leaves of the orange tree have been little used in this country, but have been an esteemed remedy on the continent, having been used at the Hague, and in the hospitals of Vienna, with evident advantage. M. Locker administered this medicine in the hospital of St. Mark to a great many epileptic persons, and found it superior,

1. A primary disease, not depending on another.

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he says, to the most celebrated remedies, all of which he had tried. The dose is from a scruple to a drachm of the powder, three times a day. The powder of misseltoe is an ancient anti-epileptic, and is frequently of great service. Boerhaave Van Swieten, Dr. Willan, and other celebrated physicians, have employed it with success. The dose is the same as that of the last article.

The lady's smock enjoyed the confidence of Sir George Baker and Ray mentions it in his letters with approbation. A Cornish clergyman, of the name of Gregor, has observed, that the flowering tops of the lady's smock had been used by his family for some generations in the cure of epilepsies. They should be gathered in June or July; and the dose is a scruple twice a day, which should be increased by decrees to a drachm or a drachm and a half.

A seton or issue, in the neighbourhood of the spine, should seldom be neglected in this disease. It is frequently a valuable adjunct to the internal medicine made use if, and is sometimes effectual alone. It seems particularly indicated where there is a preternatural fulness in the blood-vessels of the head.

Beside the above remedies, the nitrate of silver, valerian, nux vomica, thorn apple, the oil of turpentine, and some other medicines, have been occasionally useful; but they are, in my opinion, inferior to the preceding. The nitrate of silver owes the reputation it has lately gained, as a remedy for epilepsy, principally to the support given it by Dr. Baillie. It certainly has been employed with success; and may be administered in doses of from one to six grains, three times a day, made into pills with crumb of bread, and mucilage of gum arabic. Of all the forms of giving valerian, that of the oil would seem to be the most eligible, which is a favourite medicine for this complaint in Germany.

The tincture of nux vomica is strongly recommended in that species of epilepsy which appears on the cessation of the menses. Sixteen drops may be given every three hours, increasing it gradually to twenty-five drops or more in water.

Many of the ancient authors had great faith in the virtues of cinnabar, hence it acquired the name of *magnes epilepsioe.* Some German physicians of the present day regard it almost as a divine

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remedy, and in a recent number of *Hulfeland's Journal* it is much praised in the following form :

Take of Factitious cinnabar, oxide of bismuth, and herb tobacco, of each ..... 1 scruple;
Extract of aloes ..... 5 grains.
Mix them well, and divide the mass into twenty pills; one of which is to be taken twice a day.

The external application of opium is sometimes worthy of trial. A young lady was brought to M. Portal, an eminent Parisian physician, who was every day attacked by violent epileptic fits, which began in one of her toes; this circumstance suggested to him the idea of cutting the nerve, for the purpose of interrupting the communication, but he began by the application of opium to the nerve, and that alone proved sufficient to effect a complete cure. The use of the opiate liniment No. 39, page 161, is very useful in that furious state, which sometimes supervenes a fit in strong robust habits. It soon effects a calm and induces sleep. A combination of genuine musk with opium, as an internal medicine is likely to prove very valuable in some cases of epilepsy.

Electricity and galvanism are reported to have been resorted to with considerable benefit in some bad cases of epilepsy.

A new remedy for epilepsy has lately been tried on the continent, by Dr. Burdach of Triebal and Professor Hufeland of Berlin, consisting of the roots of the common mug-wort, *(artemisia vulgaris),* dried in the shade, and a short time before it is used, powdered. The dose is from fifty to seventy grains or a large tea-spoonful, of the powder, in a little warm beer, about half an hour before the expected attack. The patient should then be placed in a bed, well covered and drink warm beer. The first dose, it is said, generally gives some relief, and sometimes performs a complete cure; but the dose should be repeated every other day. Out of ten cases treated by Professor Hufeland, three were perfectly cured, and three greatly relieved. The other four did not experience much benefit. One of this physician's cases is very striking; a girl aged seventeen, had had a fit every day for ten or twelve years, in

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consequence of a blow on the head she was quite cured by a single dose. A man, aged twenty-nine, who had had fits for years, was quite cured by two doses. Since the publication of the second edition of this book, it is said that Dr. Boire, the physician of the hospital at Versailles, has for some time been very successfully exhibiting mug-wort in cases of epilepsy. A drachm was given four times a day, by Dr. Home of Edinburgh, to a woman who had been affected with *hysteric* fits for many years, the fits ceased in a few days. In this patient, assafoetida and ether had been given to no purpose.

The following prescription has perfectly succeeded in a very severe case of epilepsy occurring in a strong young man in the author's connexion, and it has also been effectual in the last two or three instances reported to him.

Take of Oxide of zinc	half a drachm;
Powder of squills	1 drachm;
Gum assafoetida	1½ drachm.

Mix, and divide into thirty-six pills, of which take one pill three times a day in the beginning, and gradually increase the dose to two pills thrice daily.

The *bromide of potassium* has been used with success, and the reader will find some valuable remarks on the subject in the author's book *On Female Diseases,* seventh edition, under Painful Menstruation.

In debilitated habits, the cold bath is an advisable assistant. The cold affusion to the head is more generally applicable, and frequently more beneficial. When the disease is the consequence of onanism or excessive indulgence of the venereal appetite, the affusion of cold water on the head, and organs of generation, should not be neglected.

When the disease appears to have been occasioned by excessive evacuations, we should endeavour to restrain them; when by suppressed discharges, they ought, if possible, to be restored. In the latter case, blisters, issues, the warm bath, and diaphoretics, are among the best remedies. If the piles are suppressed, leeches should be applied to the anus, and aloetic purgatives administered.

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Blood-letting is a frequent resource among professional men in the present complaint; but I very much disapprove of it. The plethora sometimes associated with the disease is much more safely and effectually reduced by a spare diet, purgatives, etc., than by bleeding. *See* page 284.

Attention to diet and exercise is of great consequence. If the malady be connected with or dependent upon, debility, the diet should be generous and nutritious; but to avoid irritation, the quantity must be small. For instructions as to the quantity and quality of the food, see *Indigestion.* In strong robust constitutions, the diet should be spare; and if the habit be very plethoric, a total abstinence from animal food and strong drink will be highly necessary. Such a course has proved of great service to plethoric epileptics.

The observance of early hours is valuable, and horse exercise is much to be recommended. It has been wisely suggested that the patient should make an entire change in his habits, which is a practice worthy of general adoption. I have known several epileptics in whom the disease has ceased spontaneously, after an ineffectual trial of various medicines, which occurrence has probably followed some unobserved, though to them important, change in their general mode of living.

When the fit is actually present, the patient should be placed on a bed or sofa, the head somewhat raised, and those parts of the dress removed that are likely to press upon the vessels of the neck. In order to prevent the tongue being injured by the spasmodic action of the muscles of the jaws, a piece of soft wood or a napkin properly rolled up, should be introduced between the teeth. It was formerly the practice to apply acrid stimulants to the mouth and nose, but these are now generally condemned.

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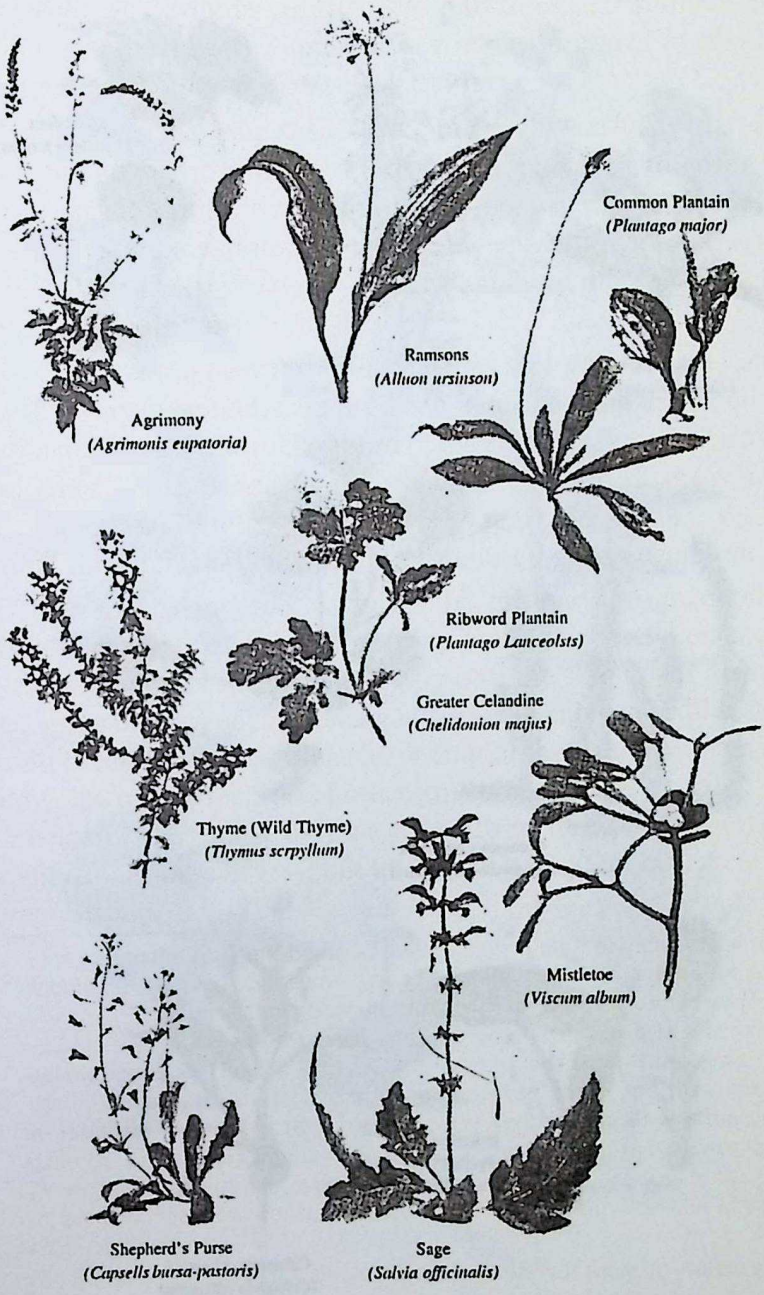

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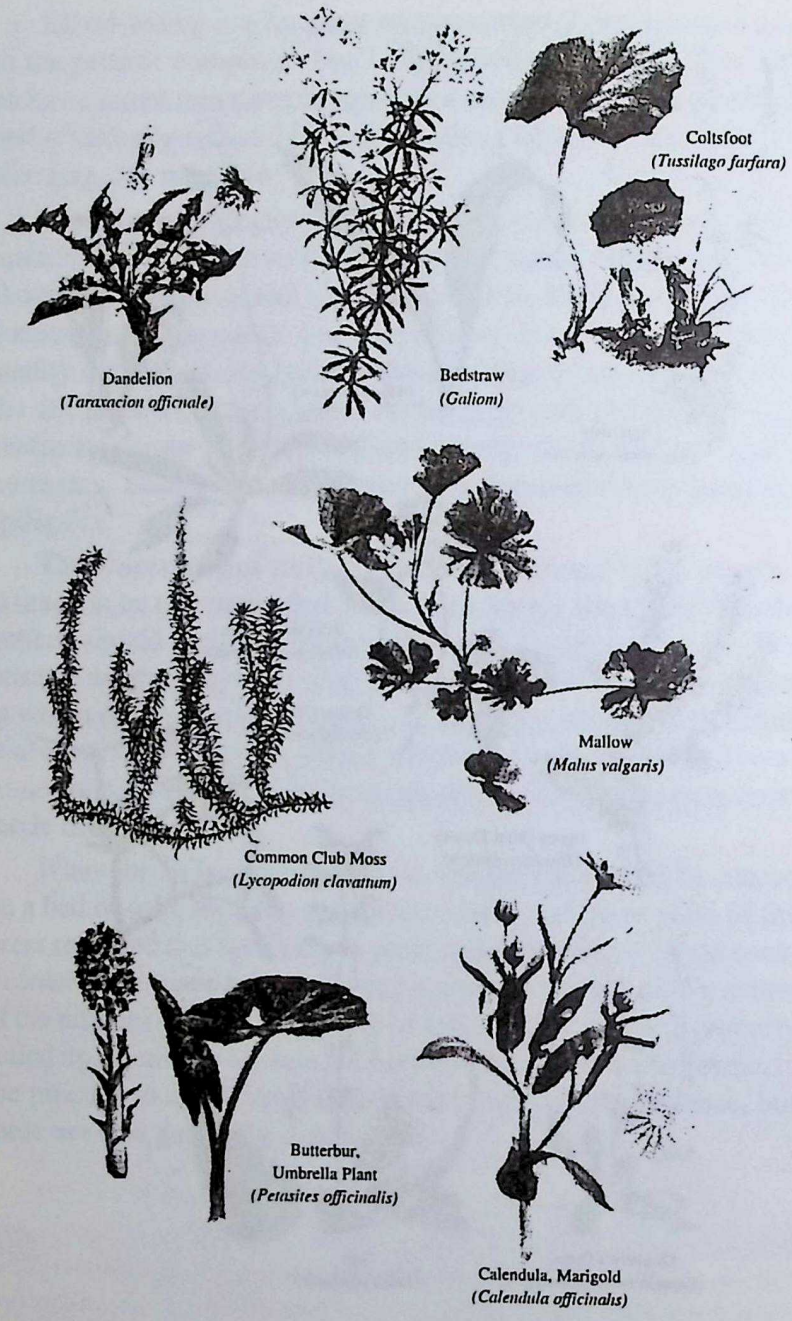

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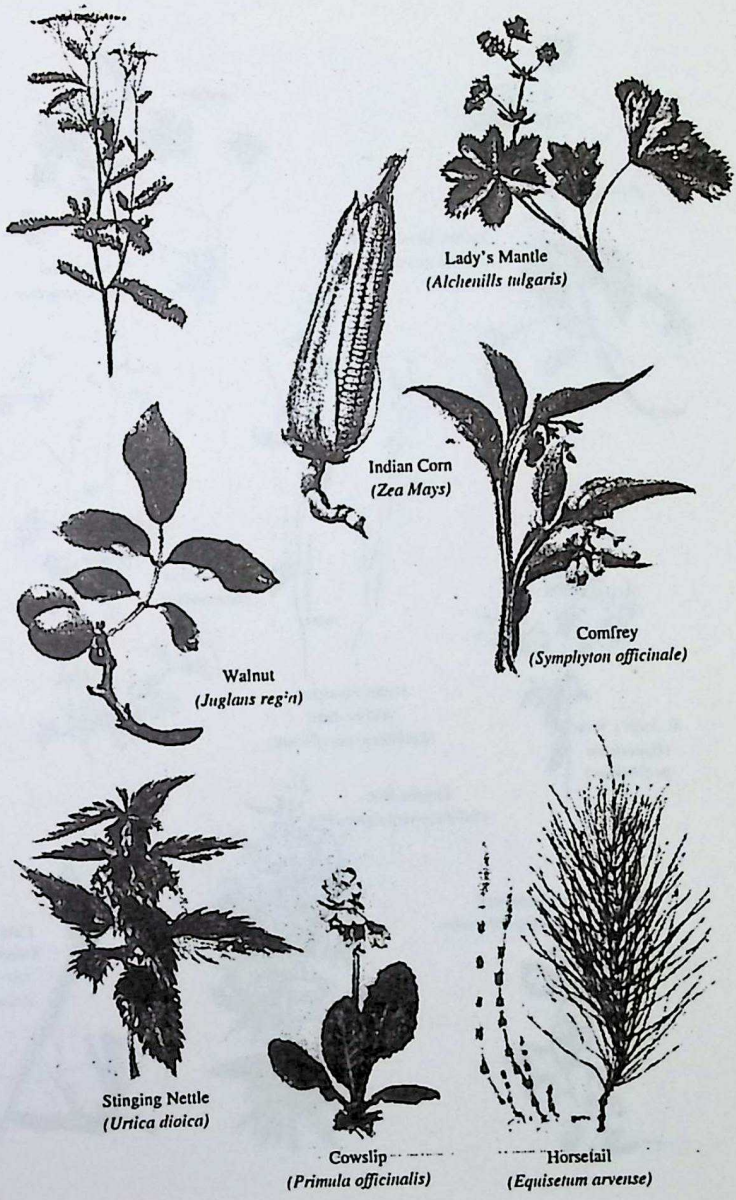

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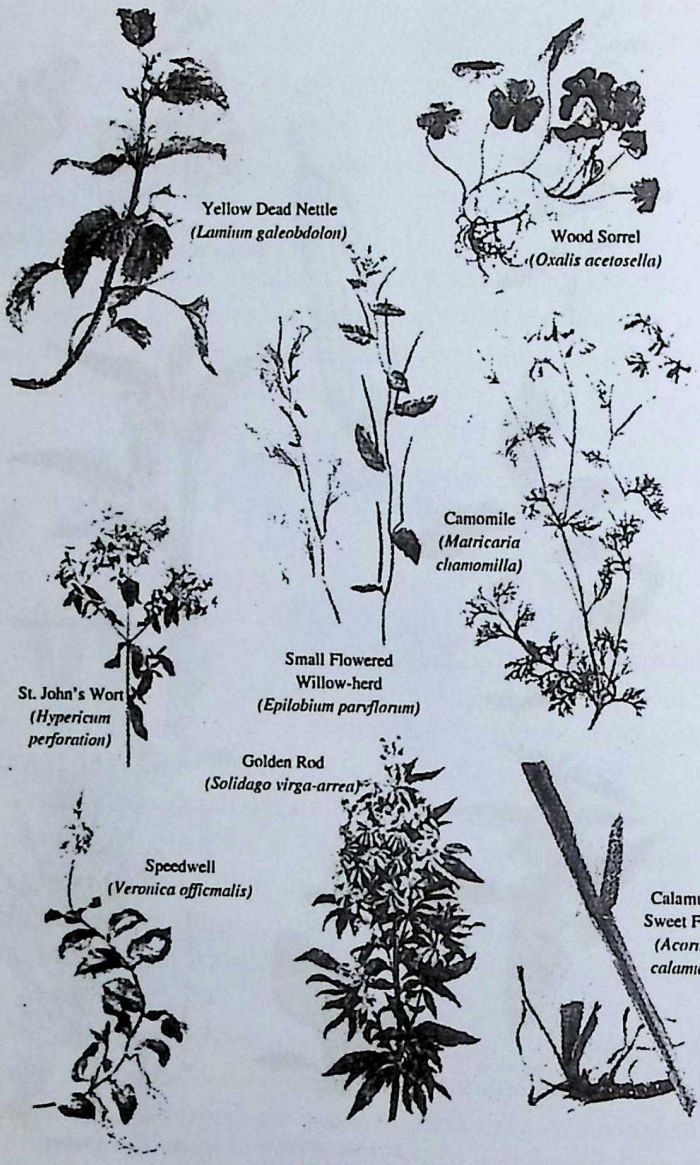

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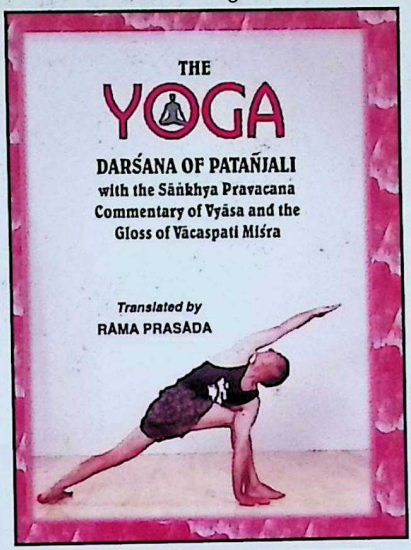

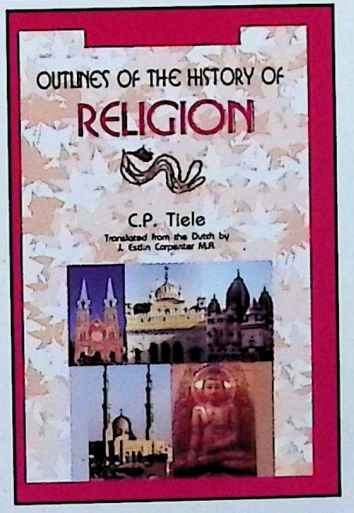

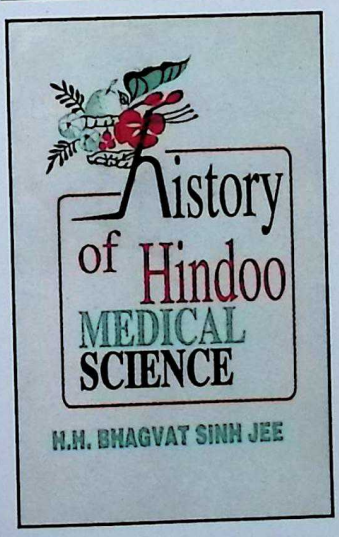

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